CHICAGO SCHOOLS JOURNAL

Francis W. Parker
Disturbed Children
The New Technology
Library Seminars

April, 1961

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Francis W. Parker and Public Education in Chicago

The Stormy Career of a Great Educational Reformer

● *Franklin Parker*

Chicago was a key city in the emergence of industrial America. Its access to the Great Lakes for cheap water transportation enhanced its position as a railroad terminus for cattle and grain exports. Its burgeoning trade, commerce, and industry swelled its population to a million people in the 1880's, making it the second largest city on the American continent.

Its success was due to the initiative of such industrialists as Marshall Field, Cyrus McCormick, Phillip Armour, Gustavus Swift, and George Pullman, who had wealth and held power. But its achievements depended as well upon the laboring mass it attracted, most of whom were immigrants—frightened, unassimilated, underpaid—tolerating their tenement squalor in the belief that the American Dream would give to them and surely to their children opportunity and dignity.

Into this Chicago crucible were also gathered leaders of reform ready to do mighty battle. Among them were Francis Wayland Parker, who came in 1883 as principal of Cook County Normal School[1] at Englewood; Jane Addams, who started Hull House in 1889; William Rainey Harper, who founded the University of Chicago in 1892; and John Dewey, who chaired the University's philosophy department in 1904 and directed its experimental school in 1906.

Parker First to Lead School Reform in Chicago

Outwardly these were tough-minded fighters against abuses; inwardly they were sensitive innovators of social justice. What they strived to do was to bring the immigrant mass into the American stream. Francis Wayland

Although Chicago area teachers are aware of the existence of two local public schools and a private school named after Colonel Parker, too few are aware of his connection with Chicago and the predecessor of the present day Chicago Teachers College. Too few realize the basic nature of the contributions he made to education both locally and elsewhere. This article sketches briefly and interestingly the career of this stormy petrel of nineteenth century America. Dr. Parker, who ruefully admits being related only spiritually to Colonel Parker, is assistant professor of education at the University of Texas.

[1]Now the Chicago Teachers College.

Parker, first on the scene, by fighting the hardest battles against the greatest odds, helped make the way somewhat easier for those who followed.

Parker, the blunt and aggressive man who led in making Chicago the nation's educational storm center before 1900, was born October 9, 1837, in Piscataquag Village, New Hampshire. He had been named Francis Wayland after a famous New England preacher and president of Brown University. His father, a partially deaf cabinetmaker, died when Francis was six.

An uncle, appointed his guardian, apprenticed Francis to a farmer in Goffstown, New Hampshire, where he worked five years, attending school eight weeks of each winter. Over his guardian's objections, he went to school full time for three years at Mount Vernon, New Hampshire, working after hours and during summers to pay his way.

Did Early Teaching In Country Schools

Parker asked his guardian for the remaining forty dollars of his inheritance to finish one more term of school. This would enable him to be a teacher as his mother and grandfather had been. Again over his guardian's objections, he finished the school term and in 1853 at sixteen began six years of country school teaching in New Hampshire at Corser Hill, Auburn, Hinsdale, and his native Piscataquag.

A former classmate who was first assistant in the school at Carrollton, a hamlet in western Illinois, recommended Parker as its principal. There from 1859 to 1861 he taught 125 pupils to mend and whitewash fences, dig weeds, and sow grass for a proper playground on the school grounds.

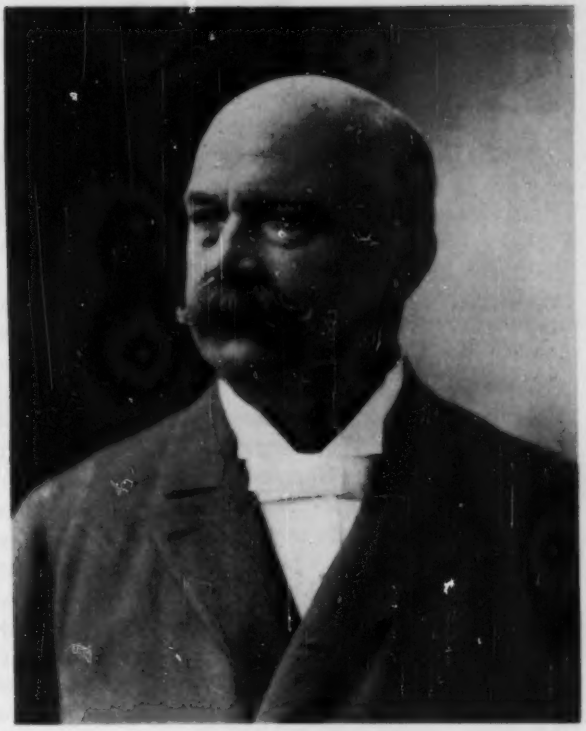
The Carrollton school board members, originally from Kentucky and Virginia, were Southern sympathizers during the Civil War. Parker incurred their displeasure by voting for Abraham Lincoln and by trying to join a cavalry company being formed there for the Union Army. As punishment, his school board members reduced his salary.

Achieves Excellent Record in Civil War

While vacationing at home in New Hampshire during the 1861 school term, he received a telegram from Alton High School board members who, sympathizing with his patriotic stand at nearby Carrollton, wanted him to be principal of their school. Parker accepted, but before leaving home he was asked to help recruit a military company. Anxious to support the Union, he accepted a commission as a lieutenant in September, 1861, in Company E, Fourth New Hampshire Volunteers.

Parker took part in the Battle of Port Royal Bay in 1861, the Florida expedition in 1862, and the siege of Charleston in 1863; and served as a captain under General Butler in the Virginia campaign of 1864. He received a gunshot wound in the throat in August, 1864, a wound which left him with a permanent rasping quality to his voice.

While on convalescent leave in December, 1864, he married Phenie E. Hall of Bennington, New Hampshire. Returning to duty at New Haven, Connecticut, he was promoted to the rank of lieutenant colonel, rejoined his



Francis Wayland Parker (1837-1902)

regiment at Port Royal, helped supply General Sherman's Army, and was captured. When Lee surrendered, Parker was paroled at Greensboro, North Carolina, and from there returned home.

Returns to Teaching In New England

Against the advice of friends, Parker declined a commission in the regular army with a post in Washington, D. C. Instead, from 1865 to 1868 he was principal of the North Grammar School at Manchester, New Hampshire, at an annual salary of $1,000. Influenced by his military experience, he made use of competition as an incentive for pupil effort and ranked pupils according to achievement.

Political affairs made Parker's school work untenable in New Hampshire. He went west again in 1868 to become principal of the First District School of Dayton, Ohio, at a salary of $1,600. This was his first experience with very small children. Wanting to learn more about primary education, he studied the writings of Edward Sheldon, who had introduced Pestalozzi's object lessons at the Oswego Normal School in New York.

In 1869, Parker was appointed principal of a new normal school in Dayton, Ohio, and there his awakening reform ideas evoked opposition. By questioning the accepted pattern of teaching solely from a textbook, he aroused the criticism of publishing firms. Through adverse newspaper reports

of his innovations, these interests sought to oust him.

Criticism, Legacy Lead To European Study

Parker's bold stand spurred on critics, who, casting about for reasons to justify their attacks, pointed to the fact that he was not a college graduate. The death of his wife in 1871, the mounting criticism, and his own uncertainty about the correctness of his views caused him to resign in 1872.

A turning point now came in Parker's career. A $5,000 legacy left him by an aunt enabled him to study at the University of King William in Berlin and to travel in Holland, Switzerland, Italy, and France. This period of study and travel between his thirty-fifth and thirty-seventh years was most influential. He came in contact with the work previously done by Pestalozzi, was influenced by the Herbartians, and was particularly attracted to the Froebelian Kindergarten schools, which he studied intensively in Berlin.

Before his European study, Parker had not made any unique educational contributions, other than those achieved by a commanding personality in the classroom who could reach and motivate pupils. His Civil War experience had left him a martinet in discipline and a believer in competition and emulation. These attitudes somehow changed after his study in Germany.

National Reputation Acquired in Quincy

Returning to the United States early in 1875, Parker at first could not find a suitable post at home or in Boston, where he preferred to be. Then, through a chance acquaintance with a member of the famous Adams family of Quincy, Massachusetts, he was appointed the first school superintendent of that city. There in the five years from 1875 to 1880 he gained his first national reputation.

Evaluating Parker's contributions at Quincy, John Dewey in 1902 pointed out that routine school work had so absorbed teachers that they had lost sight of the individual pupil. In the good results he gained at Quincy, Parker focused the attention of educators on the individual child and, in the tradition of Rousseau and Pestalozzi, placed the learner at the center of the educational process.

I. L. Kandel[2] recently reported that Parker at Quincy had been among the first school administrators to provide teachers with assistants in each class to help backward pupils. Kandel also pointed out that Parker's attempts at ability grouping and his plans for unit instruction antedated by more than twenty-five years similar efforts by Carleton Washburn at Winnetka, Illinois, and Helen Parkhurst at Dalton, Massachusetts.

Move to Boston Proves Unwise

Inevitably some Quincy teachers and community members opposed Parker as a faddist and a fanatic. But his school board members supported him, among them John Quincy Adams, Charles Francis Adams, Jr., and James H. Slade. Opposition and his own intransigency gave him vast publicity.

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[2]Isaac L. Kandel, *American Education in the Twentieth Century* (Cambridge: Harvard University Press, 1957), p. 137.

By one account, as many as 30,000 visitors came to observe his methods at Quincy.

Of his success there he wrote, "When our schools in Quincy became famous and thousands of visitors poured in, and it was written up in all the papers and discussed, I was probably the most astonished man in the whole community."[3] Asked to explain his "Quincy Method," Parker scoffed that he had no method but rather that he had borrowed from any source he could which helped him make learning real, useful, and enjoyable.

Parker moved on to Boston in 1880 as one of six supervisors under a city superintendent and was placed in charge of several of the primary schools in South Boston. Since the Boston school system was larger than Quincy's, more centralized, and more highly systematized, it was understandable that Boston school people should be conservative in their curricular and administrative practices. Some teachers and principals in Parker's district opposed his liberal school views.

Appointed to Head Cook County Normal

This opposition, along with his being more removed than he liked from classroom activities, prompted him to leave Boston. In 1882 he married Mrs. M. Frank Stuart, who was the first assistant in the Boston School of Oratory, and in 1883 he became principal of the Cook County Normal School at Englewood, then a suburb of Chicago.

This fifteen-year-old county normal school, which had had a struggling existence, had declined markedly after the death of its first principal, D. S. Wentworth. What was needed was an administrator with a firm hand who was a builder—requirements Parker admirably filled.

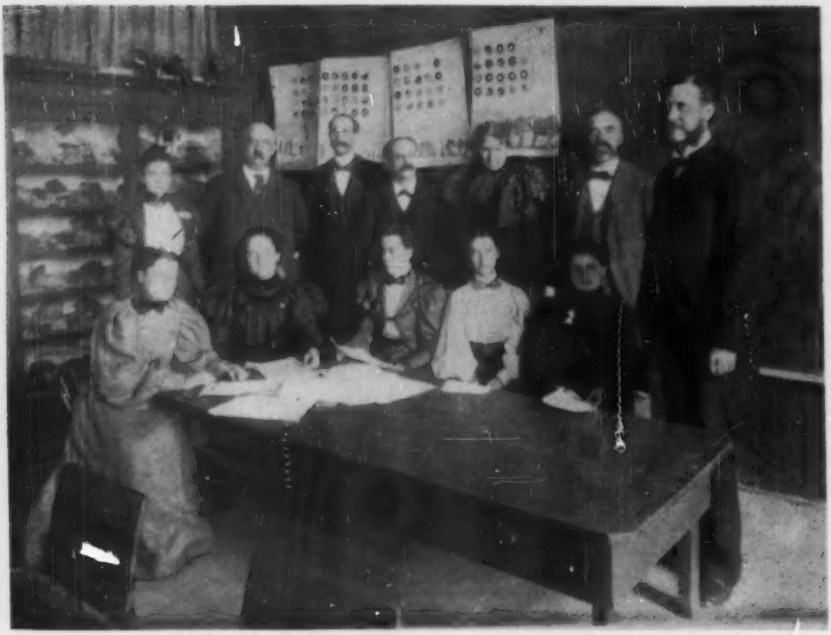
The normal school consisted of a professional training class and a demonstration elementary school. During his first year, Parker introduced a manual training department into this elementary school. Said to have been among the first in the country (1883), this department antedated by more than ten years similar manual training work in Dewey's experimental school at the University of Chicago. In the years that followed, he was to inaugurate a laboratory approach to learning in several other areas of instruction as well.

Developing an Activity Program in Chicago

Though Parker emphasized learning through activity programs rather than through memorization, he insisted that his teachers be thoroughly prepared in subject matter, teaching methods, and child development. Before his student teachers could teach in the demonstration school, they were required to prepare acceptable subject matter "knowledge papers" and teaching method "lesson plans."

Parents of pupils in the demonstration school at first opposed innovations whose results were not immediately evident. This opposition changed to approval when it was seen that Parker's pupils actually received more attention, care, and character training and that they acquired more knowl-

[3]William M. Giffin, *School Days in the Fifties* (Chicago: A. Flanagan Company, 1906), p. 131.



Colonel Parker and his staff at the Cook County Normal School. The posters and the specimens on display testify to the presence of an activity curriculum. CIRCA 1890.

edge and skill than did children in other elementary schools. His kind of education was dynamic and vital, appealing alike to children of literate and illiterate parents.

Supporters Rally to Overcome Opposition

Loyal support from parents, teachers, ministers, and educators saved Parker time and again from dismissal during his bitter clashes with Cook County and Chicago school board members, politicians, and conservative elements. Vigorous in his defense were Jane Addams and Rabbi Emil G. Hirsch of Chicago, who staunchly shared his view of the public schools as agencies for the Americanization of immigrant groups.

Although he was by far the most controversial figure in Chicago's educational circles, he managed to stay longer at the Normal School than in any other position he held, and it was there that his mature educational theories stood the test of time. On the national scene he figured prominently at National Education Association meetings from 1880 to 1900. In 1893, he served on the NEA Committee of Fifteen, which recommended revision of the elementary school curriculum.

Parker's work at Chicago Normal School, as it was renamed in 1896, attracted wide attention — even more than at Quincy. Visitors from all over the United States and from foreign countries came to observe.

Among the visitors in 1897 was a public-spirited Chicagoan, Mrs. Emmons Blaine, who had inherited a large fortune from her father, Cyrus H. McCormick, inventor of the reaper. Her husband's death early in their marriage and the need to raise her fatherless son prompted her keen interest in primary education. She took teacher-training courses and became an expert teacher.

Parker Leaves Chicago Normal After 16 Years

Realizing the far-reaching significance of Parker's educational ideas, convinced of the soundness of his views, and wishing to free him from the criticism so often leveled at public administrators, Mrs. Blaine offered to endow a private teacher-preparatory school for Parker and a number of faculty. Parker accepted and in 1899 founded the Chicago Institute. It consisted of a teacher-training department and a demonstration elementary school.

Soon after its inception, President William Rainey Harper of the then fledgling University of Chicago urged Parker to merge the Chicago Institute into the university as its department of education.

With Mrs. Blaine's financial help, the year-old demonstration school of the former Chicago Institute was continued as the Francis W. Parker School, a private school which exists to this day. Parker served briefly as the first director of the University of Chicago's Department of Education until his death on March 2, 1902. John Dewey succeeded Parker as director.

The Nature of Parker's Contributions

In the last analysis, what precisely did Parker contribute to American education? Why should John Dewey have credited Parker with being "the father of the progressive education movement," and what did G. Stanley Hall mean when he said of Parker's work, "I come here every year to set my educational watch"? Why did Harold Rugg, who found in Parker a kindred spirit, write of him as "the pioneering genius of the new education in America"?

Something of Parker's contributions may be found in the fact that as an early school reformer he improved the teaching of geography and first popularized the core curriculum approach by concentrating learning around key subjects. Something may also be inferred from the fact that Parker pioneered the break away from the deadening teaching routine that so long had gripped American education. School, Parker said, should provide fresh adventures and new experiences. "Whatever else you do," he told his teachers, "do something different. Uniformity is death; variety is life." And Kandel's observation about Parker's having focused educators' attention on individual differences has already been mentioned.

Founder of the Child-Centered School

Rugg stated without reservation that Parker's demonstration school in Chicago was "the first 'child-centered school' in America, and one of the first to be created anywhere in modern industrial society." Kandel's analysis, supplementing Rugg's statement,

pointed out that without the benefit of G. Stanley Hall's psychological skill or Hall's laboratories, Parker intuitively succeeded in making learning grow out of children's spontaneous tendencies. If one were so inclined, he might find and trace a thread of influence from Rousseau's *Emile,* to Schiller's *Letters on the Aesthetic Education of Man,* to Froebel's *The Education of Man,* to Parker's kindergarten study in Germany, and to his Quincy and Chicago innovations.

Merle Curti includes in an evaluation of Parker[4] the bold statement, "Parker began the emancipation of the American child." He also lists for Parker a significant array of firsts: first to establish a large garden in a public elementary school, one of the first to make field trips and visits to factories and to the country a part of instruction, and among the first to unite home and school.

Certainly on the last point Parker was a pioneer. His parent-teacher meetings, among the earliest in America, were also among the most successful. Because his work was new and different, and hence often suspected and criticized, he wanted to make clear to parents what he and his teachers were doing and what his educational aims and methods were designed to accomplish. In binding strands of understanding and cooperation between home and school, Parker benefited pupils and teachers and the school itself as a social institution.

Provided Courage Needed To Direct Public Education

Parker's contributions ultimately rested on his courage. It took courage to break new paths, knowing that criticism would follow, even from honest and honorable people. It is always frightening to go against a popular trend.

To children he was tender; to teachers encouraging and challenging. To the public he was a shocking and disturbing force. To those who opposed him he was fearless and aggressive. He accepted the challenge his time and circumstances placed upon him. Nothing became him so well as the mantle of reformer.

He introduced into the public schools a social concern. He made these schools agencies for the assimilation of children of immigrant parents. He encouraged democratic procedures in the classroom. He raised the status of teaching. Chicago provided the challenge. Parker responded nobly.

[4]Merle Curti, *The Social Ideas of American Educators* (New York: Charles Scribner's Sons, 1935), pp. 374-395.

Character constantly realizing itself in practical citizenship, in community life, in complete living is the immediate, everlasting, and only purpose of the school.

— *Francis W. Parker*

Some Reflections on Technology in Teaching

Strengths and Limitations of Machines in the Schools

● *William I. Harber*

That there is a steady advance in the application of technology to teaching is apparent to most teachers. Many of us, as students, never saw an educational film or filmstrip used in the classroom. Slides were used, large glass ones, in large, bulky "magic lanterns." Public address systems in large lecture halls were rare. Some of us can recall making recordings of our voices in speech classes; few can recall the use of recordings in language courses.

Audio-visual aids were at first accepted more or less cheerfully by the teacher as useful devices for supporting or enriching instruction. However, as teaching devices became more sophisticated, the cheerfulness began to wear thin.

The disenchantment of the teacher was not based on fancy. The teacher knew that engineers and psychologists had taken a hard look at teaching and had found certain areas where a mechanism could substitute for a person. The actual introduction of a machine in place of a teacher carried with it a two-fold impact: first, shock to the self-image of the teacher as a professional unaffected by technological developments; and second, the implication that there were operations in teaching that were so repetitive that they could be programmed by cams and gears.

Machines as Means Of Testing Knowledge

Over the years, there has been a steady application of technology to the grading of objective examinations. Among the many reasons why these examinations have to a large degree replaced essay tests is the use of rapid machine-scoring. The IBM machine-scorer is now one of the essential tools of a program of examinations of any

The use of technology in teaching is apparently here to stay despite a less than warm welcome on the part of many teachers. The author of this article feels that, properly used, television is an effective means of doing away with some of the less rewarding aspects of teaching and allowing the teacher to place additional emphasis upon the creative aspects of teaching. He feels that television instruction can be effective at both the secondary and college levels. Dr. Harber teaches physical science at the Wilson Branch of the Chicago City Junior College, which has been providing television instruction for several years.

size, and its presence in a school is looked upon both with pride and a sense of relief.

How far down down the engineer's line of vision is it from mechanically scoring an examination to administering it mechanically? How wild it may still seem to some to imagine a group of students taking an examination by pressing levers on a machine which exposes one question at a time for a given number of seconds. And how expensive! Yet does this not compare with the replacement of the pencil and paper ballot in the voting booth by the voting machine?

Today, almost any freshman college chemistry laboratory has a room set aside in which there are from twenty-five to thirty-five analytical balances costing over a hundred dollars apiece. In many cases, this room is in active use by students for about six weeks of a sixteen week semester. Yet it is considered a worthwhile investment in equipment and space, because these instruments help the student to learn fundamental concepts of the nature of matter.

In the early stages, teaching-machines will probably be set up in "teaching-machine rooms" similar to the "balance rooms" of the chemistry laboratory. Students will make use of the machines as they are encouraged to help themselves master a particular subject. At this writing, Teaching Machines, Inc. has a twenty-dollar machine on the market with programs of instruction in Russian, spelling, algebra, statistics, Hebrew and the fundamentals of music. The cost of the programs varies from five to fifteen dollars.

Appropriate Uses For Teaching Machines

As these machines prove their worth, their use will become more sophisticated. The teaching machine will be integrated with the progress of the course rather than used as a supplementary study technique. At first, lectures may be used along with exercises on the machines. As experience with the machines is acquired, the student will move from machine to teacher mainly for clarification and advanced understanding.

It is not difficult to imagine a class of thirty-five students beginning a course where two hours a week are scheduled for machines and one hour for a meeting with the instructor. As students complete each topic they advance to the next, each student moving at a standard pace or more rapidly if he chooses. As the semester progresses more and more students complete the series of topics under study, and take the final examination. Half of the group may be finished by midsemester!

The teacher will then be meeting with half of the original number of students to whom he can give increasingly intensive help. It is not improbable that during the last weeks of the semester there may be only one or two students in the weekly meeting period. These students will be getting almost individual attention, and they are the ones who most likely need it most.

Television Replaces Live Lecturers

It should come as no surprise that currently the largest use of television (and to some extent specially prepared

long films) is in the lecture classroom of the college. It is most frequently at this level that the passive role of the student in the learning process has been formalized and the pupil-teacher relationship diluted. Lecture halls are almost the size of theaters, seating hundreds of students. Way down in front stands the professor, still visible, but not always audible. In the case of a science lecture, most of the demonstrations are obscured, the formulas on the blackboard blurred.

It was obvious to the engineers that here was a made-to-order situation for technology. By means of television, the student could see the professor, the blackboard, and the demonstrations, and hear the lecture. One might expect a loud cheer from the teaching profession, but few cheered.

The Nature of The Lecture System

Television is finally putting the lecture system of education in its proper perspective. The modern lecture is an outgrowth of a system of teaching which goes back to the birth of the European universities. Here outstanding authorities lectured to small groups of students, who paid their fees directly to the lecturer. The lectures were informal and admixed with much discussion, many questions and answers. Over the years, the lecturers came to be paid by the institution, the size of the classes grew larger, and the role of the student grew more passive.

J. D. Bernal in *The Social Function of Science* (Macmillan, 1939) distinguishes between the lecture which "may be an inspired and generalized commentary on the subject, intended to arouse interest and stimulate thought by dwelling on the present limitations rather than on the established status of knowledge" and the "conscientious lecture in which all the points, particularly the numerical results and mathematical arguments required to establish them, are carefully and methodically expounded. These lectures are usually incredibly dull, but are much valued because it is realized that anyone who attends them and takes good notes can hardly fail the bookwork part of his examination." Professor Bernal further believes that "it is not only pious conservatism that has caused the present lecture and demonstration system to be retained; any more useful alternative would be bound to be more expensive because it would increase the ratio of teachers to pupils and the amount of apparatus which each pupil would require."

Today the lecture system has reached a point of no return. In some colleges the largest auditorium is used for lectures. The teacher who gives the lecture may never meet his students outside the lecture hall. The entire atmosphere is impersonal. If the students are especially restless, the lecturer turns up the volume of the public address system and drowns out the noise.

Teachers Lukewarm To Televised Lectures

The engineer and the technologist have observed the situation and have taken care of the physical shortcomings. Why, then, have the teachers responded so poorly?

In the first instance, the idea that television would make it unnecessary for them to give the lectures themselves was a blow to the professional

pride of teachers. I failed to mention earlier that in spite of all difficulties the lecturer, mounted on a podium, looking at the faces of several hundred students, feels a sense of fulfillment. He is presenting the subject as he sees its varied hues and colors. To have all these young minds slip from his grasp represents a genuine loss.

In the second instance, the teacher feels that when he has lost the lecture aspects of a course he loses the most influential part. Actually just the opposite is true! The lecture usually represents merely that portion of the course where the student is *presented* with information. In some instances, a good text can perform the same task.

The Promise and Limits Of Television Teaching

What remains for the teacher is the most exciting portion of the course—the discussion and evaluation of the information. And this is the real promise that television lectures bring, a promise that the skill and patience of the teacher can be used at this high level — refining, evaluating, and supplementing the course content. Here is where the student-teacher relationship is most important, where there can be maximum interplay in the learning process. In this area of learning, television cannot replace the teacher.

The largest contribution of television to teaching will be in the high schools and colleges. Here lectures constitute a major part of the teacher's day. Relieved of a good portion of lecture responsibilities, high-school and college teachers will be able to devote more time to discussion periods, laboratory direction, and individual instruction of students.

It is unlikely that the application of television to teaching will find extensive use in the elementary school. It is in the elementary school that learning and discussion still proceed concomitantly, and any dilution of the close relationship that exists between teacher and pupil would be a calamity.

However, many drill excercises can be programmed by inexpensive teaching machines. This will mean that it will be possible either to have separate rooms set aside in which pupils will spend some time at the machines or that several machines will be available in each classroom.

Television, teaching machines, testing devices, and the whole range of audio-visual devices, far from offering a real threat to the teacher, show promise of supporting the teacher's efforts in two ways: by performing efficiently some of the less rewarding tasks of education, and by freeing the teacher to devote more of his time and attention to those more fulfilling aspects of education in which his skills are essential and irreplaceable.

It is nothing short of a miracle that modern methods of instruction have not yet entirely strangled the holy curiosity of inquiry.

— *Albert Einstein*

Educational Treatment Center For Disturbed, Handicapped Children

Day School Educates Children Regular Schools Cannot Serve

● *Virginia F. Matson*

It is reasonable to assume that the disciplines of education have much to contribute to the therapeutic development of children with severe psychological and neurological disorders which affect learning ability. It is equally reasonable to assume that such children deserve the best that education can give them, particularly since without help they might well become public charges for all the rest of their lives.

Grove School is an educational treatment center for such children, operated on a day-school basis in Lake County, Illinois. Its goals are both general and specific.

General goals include the following:

1. Teaching the children of the county with psychological and neurological learning disorders

2. Developing and exploring new techniques for teaching these children

3. Offering local special education directors a place where such children can be intensively observed in a regular classroom situation to facilitate proper evaluation and placement

4. Providing a place for pre-school handicapped children who need training in preparation for a formal classroom atmosphere

5. Retraining skilled teachers from regular classrooms to meet the shortage of trained teachers in the field of special education.

Some specific goals are as follows:

1. Training each child admitted to the program to be a socially acceptable person and, if possible, economically useful

2. Developing adequate language skills for the children in the program

3. Assisting each child to be an emotionally stable person with adequate self controls for his social group

4. Developing the maximum intellectual skills and individual capabilities of each child in the program

5. Surrounding the children with the atmosphere of a regular formal classroom designed to exploit each child's abilities to his advantage.

Great strides have been made in recent years in the development of opportunities for trainable and educable mentally handicapped children. Most programs for such children, however, are found in large city school systems such as Chicago's. This article details the development of an experimental day-school program in Lake County, Illinois, designed to educate children who had previously been considered unacceptable for admission to regular schools and many of whom faced the almost unavoidable fate of eventual institutionalization. Mrs. Matson is director of the Grove School in Libertyville, Illinois.

School Started With Single Pupil

At the time the program was founded two years ago in Lake County, the third most populous county in the State, there were less than a dozen programs of any kind of exceptional education in the county. All but a handful were concentrated in Waukegan, far from the geographical center of the county, and, except for speech correction, less than a hundred children were being served. The county superintendent's survey, compiled at the insistence of the State Office of Public Instruction, revealed that there were over nine thousand children requiring special education in the county and over two hundred severely handicapped children not attending school at all.

Not with this in mind, however, but simply to undertake the education of one small boy whose immediate destination was a state hospital, I was impelled to set up Grove School while I was yet teaching in a small rural school near the Wisconsin border.

The boy had been thoroughly and competently evaluated over a period of seven years by the best private psychiatric facilities in Chicago. Treatment had been conducted in a private residential program until family finances were exhausted. No local educational facilities of any kind existed; thus the psychiatrist's reluctant recommendation — institutionalization as soon as possible.

Child, Untaught, Shows Desire to Learn

The child had been diagnosed "severely autistic." Autism is a disorder generally classed as emotional in origin, but of a developmental character possibly beginning prior to birth. The symptoms evidenced were severe withdrawal. At ten years of age, he did not speak and seldom gave any indication at all that he heard sound. His only efforts at communication were gesture-like and then only to satisfy his most urgent primitive needs. His basic physical activities were obsessive-compulsive twiddlings, mostly conducted in his own room or, if he were outdoors, on the family woodpile.

On my first contact with him in his home, he came to me with an armload of books, which he placed in my lap. These he shared with me while cuddled up comfortably beside me on the couch. His reaction to the pictures in them was to rub them violently with his thumb as if he must eradicate them. I sensed intuitively that this symbolic effort indicated a desire upon his part to learn how to decipher the contents of the books. This assumption proved valid, for when the school board agreed to attempt a tutoring program for him, he responded immediately. Within two months, he had made considerable progress and had uttered his first word on command.

Second Child Added to Program

The board then added to my program another severely handicapped child who had been diagnosed a "multiple convulsive" with both petit mal and grand mal seizures, now under control by heavy medication. Both children made progress individually and then together. At the close of the year, I resigned my regular position in order to devote my entire time to setting up an educational program for other chil-

dren with severe psychological and neurological learning problems. A nine-hour pilot program was planned, meeting three hours a day for three days a week. The school boards referring children agreed to pay $600 per year tutorial fee for each child. Eight children were admitted to the program in the first year, seven of whom were brain-damaged, and one severely disturbed.

Non-Profit Foundation To Administer Program

At the close of this year, it was found necessary to establish a permanent, non-profit foundation to administer the total program and to meet the annual deficit through private contributions. Grove School, Inc., was established and the assistant county superintendent of schools assumed the responsibility of supervision and the chairmanship of the foundation board. Eleven children were admitted to the program in the second year and a five-day-a-week, five-hour-daily program was set up.

The school is currently housed in a fine three-room rural school building. It is staffed by a director and five teachers, who are assisted by eight volunteers.

Staffing the program in a field in which experienced teachers are scarcer than the proverbial hen's teeth proved unexpectedly easy. Soon after the nine-hour program was established, a former supervisor of art in the public schools offered her services. She was anxious to develop her theory that art is a form of communication for both conscious and unconscious non-verbalized feelings and desires. She was convinced that art expression is therapeutic. These theories proved both correct and fruitful for the children from the moment she began to work with them.

Staff Assembled From Many Sources

Most of the children in the program suffered from some form of communication disorder. Either they were mechanically handicapped in hearing and speech, or they suffered basic language disabilities either in understanding or trying to think speech.

Fortunately for our program, the next person to volunteer was a graduate in speech and drama. With many years of experience in developing children's dramatics, she was anxious to see if this form of stimulation might prove helpful in language development. Creative drama, puppetry, acting-out abstract situations, and structured play all proved effective stimulants to thinking and the language processes.

The balance of the staff consists of an experienced classroom teacher with a strong background in child psychology, two other regular classroom teachers, a physical education teacher, and a nurse. In addition, we are aided by a regular attendant in the nursery, two music volunteers, and other dedicated helpers working to carry out the total educational program.

Children Evaluated Before Admission

Each child is evaluated by our staff prior to entry, using simple devices of an educational nature to determine the nature of his handicapping. Since all

of the children admitted by us must demonstrate varying degrees of perceptual handicapping in order to qualify, all of our testing devices are chosen to classify this type of handicap and to reveal the child's behavioral patterns while using them in a formal classroom atmosphere.

Some of the testing devices used are bead strings, nested boxes, color cones, jig saw puzzles, peg boards, a toy clock, wooden dominoes, a wooden shoe for tying laces, picture-word cards, toy money, felt letters and numbers on a flannel board, simple reading-readiness devices, and simple tests to reveal eye and hand dominance and any reading or writing skills the child may possess.

Observation Important In Evaluation

Achievement tests are used for children on established grade levels. All of the previous evaluative data which can be obtained for the child—medical, psychological, and educational — are sought.

While the child is being tested, he is observed for his ability to use and understand spoken language. His behavior is watched for signs of distractibility, disinhibition, and perseveration. We observe his coordination skills—eye-hand, space-form, background-foreground, and gross and fine motor skills. We also watch for mixed laterality, inversions and reversals in writing or forming symbols, and articulative and inflective speech problems. The child's walking, running, and ability to follow a chalk line on the floor are also observed.

Pre-School Program For Orientation

We maintain three levels of learning activities within the program: pre-school, primary, and intermediate. The pre-school or nursery program presents the child with an informal setting in which he can orient himself toward formal classroom tasks and behavior. Goals are: behavior suitable to the formal classroom; social orientation; introduction to the preliminary readiness activities for reading, writing and numbers; establishing hand dominance; development of language skills; and acquiring a healthy ego development. In the pre-school we attempt as far as possible to evaluate the child's social maturity and his behavioral progress, and to determine the prognosis for his future educational placement.

The primary program is conducted in a formal classroom setting but with the flexibility usually associated with the kindergarten and first grades. Goals are similar to those of the pre-school program, but with the addition of a definite movement up the learning ladder from readiness to the establishment of beginning the reading, language, writing, number, and spelling skills.

The intermediate program is designed to handle the child with an actual grade placement and move him along at his own learning rate through a simplified graded program for his mental age and learning abilities.

All of our levels are undergirded with supplemental offerings in language development, art expression, dramatic expression, music and rhythms, and physical education. We have also added for our children with severe manual handicapping, a program for learning to operate an electric typewriter.

Curriculum, Methods, Stress Experimentation

Great experimentation has been initiated in the areas of curriculum offerings and educational methods because perceptual training involves a wide spectrum of educational activities. No two brain-damaged children are alike, and a characteristic of brain-damage is unusually variable rates and ranges of learning.

For example, in teaching writing, we have found that we sometimes have to begin at the very lowest levels of fine motor development to train the child to write. We start him kneading hard, waxy clay. From this, we have a progression of activities beginning in the nursery school and leading to the ball point pen in the intermediate level. These are stringing large beads, small beads, arranging pegs in designs on the peg board, connecting dots in letter and number forms, tracing, copying, arranging felt letters and numbers on the flannel board, spontaneous writing, and penmanship exercises.

All Sensory Areas Used for Learning

All active sensory areas are utilized to widen, deepen, and reinforce the child's intellectual capacity. He eats an apple, paints an apple, sees pictures of apples, and hears the word *apple* until he can say it. Then he learns to read about it and write his own stories about apples.

To stimulate the child to think and relate, we use picture sequences, geometric forms, number games, missing parts and objects in pictures, and, later on, sentence-completion activities. The child has a time each morning to get up before the class and tell some interesting happening in his own experience.

Combining sound and sight activities is common practice through all the formal learning activities. The child studies large colored flash cards of his spelling words as he hears the words. In language class, he may use the *Language Master* machine, which plays the sound of the word whose picture and symbol he sees. In art, he may write the word and then draw the picture it represents to him.

Following Directions An Important Ability

In all our activities we watch for evidence of whole and complete expressive forms—the accurate picture of the body or face image, the completed sentence, the finished story.

We also emphasize following directions carefully. The child is expected to carry out the command given or task assigned. When he achieves success, he is stopped, complimented, and if it is a good try, moderately praised. There are numerous rewards for good performance. These we consider vital to healthy ego development and a contented, growing child.

We closely structure the child's behavior in all of the school settings. If necessary, he may be placed in a simply furnished room with one instructor until he can achieve sufficient self control and absence of distractibility to carry out the assigned tasks.

Firmness and consistency are used in establishing acceptable behavioral patterns. However, we feel some of the most rewarding portions of our school day occur when the children are free

to play imaginatively in the large social group, either in the playrooms or on the playground. We attempt to avoid adult participation and interference at this time as much as possible, watching only to keep the group playing together and not inflicting harm on any member of it. We also feel it important to permit a child to have the freedom to destroy or break up some things when he feels the urge. On the playground, we keep a lot of smooth, random lengths of planks and boxes, which the children can group as they please and smash to pieces if they care to.

Admission Policies Carefully Regulated

In establishing such a program as this, a number of referral and admission policies have had to be developed. We prefer to have the children referred to us by a public school district aware of its responsibilities to educate all of the children in its jurisdiction to the best of each child's abilities. We do, however, occasionally take referrals from agencies and civic organizations prepared to pay the tuition. We also will accept parent referrals if the parent can prove to us that our program is the right place, and often the only place, to which his child can go.

Prior to a child's admission, the parent fills out a preapplication form which gives us a brief medical history and the source of psychological and neurological or psychiatric evaluations, plus a summary of the findings. After the child is interviewed and deemed acceptable, the parents must assist us in acquiring the complete data, give us a social case history, and supply us with whatever knowledge they have of the cause of the disability. They must also complete any missing portions of the child's total evaluation as soon as it can be arranged.

Frequent Conferences With Parents, Specialists

We confer regularly with the parents on the child's progress and submit to them a detailed educational progress report twice a year. The educational progress report is also sent to the child's home school district, and, if requested, to his physician or specialist and his psychologist. We confer as needed with the child's specialist. The specialist also is welcome to visit the school at any time to study him in the classroom and to discuss his case history with us.

The staff meets at regular intervals and evaluates each child's progress. Plans for fitting special learning activities to his needs are made at these times and at any other time when it seems necessary. Daily charts are kept on each child, reporting significant activities in all the major areas of his development, such as speech and language, behavior, reading, writing, numbers, art and music expression, and free play.

Team Teaching, Grouping Features of Program

We feel that the team teaching approach is one of the most vital contributions we have been able to make to experimental exceptional education. It permits a healthy heterogeneity of grouping within the field of perceptual handicapping; allows for exceedingly detailed, personalized educational services to the child and individual instruction in special areas of his handicap-

ping, if needed; and provides a broad range of skills, abilities, and personalities from which the child can choose and to which he can relate.

We have chosen to admit children with a wide variety of abilities and with varying degrees of perceptual handicapping, both for the experimental aspects of our program, and for the total development of our children. Often, we discover that one child's handicap is matched by another's abilities, and both profit through the association.

Controlled Environment Permits Optimum Growth

We also have discovered that a sequestered environment is a great help to optimum development of our children. We are confident that the reason we can maintain high goals for emotional health and development comes from the permissive atmosphere possible in our setting. We are on an acre of beautifully landscaped and equipped land, shaded by many large oaks, in an excellently equipped small building, which was used until last year as a primary building to a large school located a half mile away.

We are, however, fully committed to doing the best job possible for each child in the program. If we feel that a child's personality demands it and his capabilities permit, we do not hesitate to arrange his program so that he can spend part of his time in his home school classroom with his community peer group. But we do this with caution because many of our children come to us damaged by the pressures to be "normal" exerted upon them in regular classrooms and by anxious parents.

Children Are Free Yet Face Reality

When they are with us, our children are not aware they are handicapped. They are free to act like normal children and they therefore respond very much as do normal youngsters in their free play and socializing experiences. They are happy and confident as they tackle the tasks we give them, for they know they will succeed.

Inasmuch as we are a day school, the children face the realities of life each day when they leave us and return to the total atmosphere of society in their homes, their churches, and their local community life. None of this would be available to them if they were in residential care, an alternative which they would be forced to accept if no day school facility were available to them.

Our goals follow the usual goals for exceptional children. Basically, if functioning on a trainable level, they should be socially acceptable; if educable, economically useful as well. Beyond this we would say that we feel the child's inward integration and ego development must be emphasized if these goals are to be realized. We therefore place emphasis on art, aesthetics, and free and creative expression.

Self-Control in Children A Primary Objective

We believe that acceptable behavior patterns and the ability to achieve self-control are vital to successful social adjustment. Prior to beginning any formal instruction with any child in the program, we establish firm management of his behavior.

We feel there should be no top limits placed on any child's intellectual potential regardless of the current functioning psychological skills he demonstrates. If he is classed trainable but shows ability to read, write, do number work, and spell, we help him learn in these areas, without placing any pressure on him to learn nor unduly encouraging him when he shows signs of reacting unfavorably to or tiring from intellectual effort.

It is our experience, both in study and in teaching the children, that the damaged brain is capable of some unusual recuperative powers once it begins to function as an organized unit. We therefore stress every aspect of language and intellectual attainment that we feel the individual child shows capabilities for, even though he may be functioning on a very low level in some aspects of learning. But we are also aware that a child can grow only as fast as he can. We are often content to wait with him, filling in with creative and reinforcing tasks, until he has inwardly arrived at new levels of maturity and is able to tackle tasks on higher levels of ability.

School's Value Proved By Children's Growth

We feel there is a need in every large center of population in our State for such a center as ours where the disciplines of education can be applied alongside those of medicine and psychology in serving the learning needs of children with severe psychological and neurological disorders.

Possibly the most conclusive proof of the need for schools such as Grove School is the fact that the children in our program are making excellent progress. They are happy, contented, creative children learning to be wholesome, pleasant, and useful adults. Before they came to us they were lost, aimless drifters, whose eventual fate was likely to be lifetime institutional care.

The most pleasing thing to me personally is the successful adjustment to school and the continued progress of our first boy. Upon this lad our whole experimental program was founded, and our success with him has given us the courage to go on in the face of many obstacles. Not long ago, his father, a farmer and a practical man of few words, paid us a splendid tribute when he said, "He never got anywhere until he got with you folks."

Nothing that is good is too good for the child — no thought too deep, no toil too great, no work too arduous — for the welfare of the child means happier homes, better society, a pure ballot and the perpetuity of republican institutions.

— Francis W. Parker

Library Seminar For Gifted Students

After-School Club For Student "Talkfests"

● *Lolita J. Frank*

A great many high school libraries have programs for the gifted. Each is unique in its contribution. The informal, friendly atmosphere of the school library offers a special opportunity for the formation of a warm, sympathetic relationship between teacher-librarian and students. While at Kelly High School, I felt that the school library could play a more vital role than it had been doing in the splendid academic and co-curricular program for gifted students which was then in effect in the school.

The library was already, of course, fulfilling the needs of this group in the usual ways—by providing challenging materials, both written and multisensory, and other appropriate services to these gifted students. It was felt, however, that a more active program on the part of the library could provide a breadth of intellectual, cultural, and personal values for gifted students through exploiting the relatively relaxed and undemanding atmosphere of the library—the kind of atmosphere which is not always feasible in the classroom. With this broad aim in mind, it occurred to me that a valuable service the library might perform for gifted students might be to provide the setting and the impetus for a series of "talkfests." In this way, our "seminar for the gifted" had its inception. Its conduct from the first reflected the informal tone which the library seemed uniquely fitted to supply.

Group Developed From Small Nucleus

To begin, I presented the idea of a "talkfest" to two or three superior students who I thought might be interested in a club whose members

The high school library provides a relatively relaxed and undemanding atmosphere which can be used to advantage in developing the abilities and interests of all students. This article describes how one high school teacher-librarian capitalized on that atmosphere to provide a series of stimulating and enriching student discussions of provocative problems for gifted students. Miss Frank was formerly teacher-librarian at Kelly High School; presently she serves in the same position at Cooley Vocational High School.

would discuss books and ideas. Subsequent recruiting for the group was done primarily by the students themselves among friends. An announcement was made in the school bulletin and a few members joined consequent to this announcement. However, by intent the group was kept small, for it was felt that interchange of ideas by all participants would be easier with a limited membership.

Rather defiantly, we called ourselves "The Eggheads." One artistically gifted student designed a charter membership certificate couched in grandiose language and decorated with male and female "eggheads." The group met once a week after school. Officially, meetings were to last a class period of forty minutes, but when the discussions grew especially hot they lasted considerably longer. Amazingly, attendance was quite regular for a volunteer group. The success of the meetings in arousing interest in the participants was evidenced by the fact that some discussions continued after the end of the meetings on CTA buses, in ROTC headquarters, and in other unlikely places. "It was fun," seemed to be the consensus.

Discussions Follow Interests, Not Rigidly Pre-planned

The program of discussions could have been better designed and integrated. Because of circumstances indigenous to the library situation, and because this was a first foray, plans were characterized by a good bit of improvisation. Quite deliberately, the meetings covered a wide range of subject matter, dwelling on a subject only long enough to give impetus to individual thought and study of the problems to be discussed by the students.

The first two meetings concerned human values. Two short stories of Katherine Mansfield were read by the group and discussed. The students then listened to a recording about the life and career of Winston Churchill and tried to define "greatness." Availability dictated the selection of this record. The record served as a starting point for our "talkfest." This led to such considerations as "Was Hitler a great man?" and "How about Gandhi?" It finally created an awareness in the students of the need to use precisely defined terms if the discussion were to be kept purposeful.

In another of our meetings, we discussed the differences (again values) between the Declaration of Independence, brief passages from John Locke, the Virginia Bill of Rights, and the U. N. Declaration of Human Rights. This led to a discussion of some short extracts from Stringfellow Barr's *Let's Join the Human Race.*

Students Learn Opinions Need Facts as Base

Since many adolescents (even bright ones) hold opinions and beliefs which are based on meager knowledge, I thought it worthwhile to try an experiment which I hoped would point this up. So, without previous announcement we discussed "What is Communism?" The lack of concrete, accurate fact in student comments was noteworthy and soon became evident to the students themselves. I provided much reading material to be read for the next two meetings. The change in perspective and in accuracy of statement was notable.

Important learning takes place in informal situations.

From *This is Teaching* by Haskew: Copyright 1956 by Scott Foresman and Company.

A discussion of semantics now seemed to be in order and passages from Hayakawa's *Language in Action* were read and talked about. This was followed by the group's reading an article on juvenile delinquency replete with unsubstantiated opinions and irrational emotionality. An appraisal followed based upon the principles of critical reading and good thinking. The students also had a session on "Where do Our Opinions Come From?"

Results of Informal Program Difficult to Assess

Another meeting was devoted to "What Should We Expect of High School and Our Teachers?" As a result of this, the group developed an awareness that, while the school and teachers had much to give them, they had individual responsibilities in broadening their own horizons through wide reading and cultural experiences beyond the school.

Also on the agenda was a re-reading of Shakespeare's "Julius Caesar," Plato on tyrants, and Plutarch's "Julius Caesar." This led to a discussion of revolutions, dictators, and means of achieving freedom.

It is difficult to assess the results of the seminar program, since so many intangibles were involved. However, the students themselves and some of the parents felt that it was a worthwhile endeavor.

"College Corner" Established To Serve Student Needs

At the same time the discussions were being carried on, a "college corner" was established in the library. This contained circulating college catalogs, books on various professions, books on scholarship examinations, and books on selecting a college. Many study and review outlines with the teachers' keys were made available so that students might evaluate their own achievements. Vocabulary tests were also included for self-evaluation. As a necessary caution it was made clear in individual conferences with students that this kind of quick-study and descriptive material in no way was a substitute for solid reading.

A close relationship between vocational counsellor, adjustment teacher, and teacher-librarian was also a part of the program. Lists of names of gifted students were sent to the library so that the departments were able to co-operate effectively.

In addition to providing individual reading guidance for students, the library made available lists of thought-provoking books. Special shelves aimed at the college-bound were established with such captions as "Adults Only," and "It's New. It's Science."

Research Tools, Techniques For College-Bound

As part of the general library instruction program, classes in advance library instruction were integrated with the special classes for the gifted. In these classes, reference books that the college student would find helpful were introduced. These included such books as the *Encyclopedia of Social Sciences, United Nations Yearbook,* and the *Cambridge History of English Literature.* Sample copies of indexes such as the more advanced *International Index, Engineering Index,* and *Education Index* were briefly discussed so that students would at least become aware of the wide range of library aids available to them.

It was a partial aim of this library program for the gifted to make the individual student aware of the contribution the library and its resources could make to his intellectual and cultural growth. Students became aware that the library is more than an adjunct to the classroom. Each student was led to see that if he would accept the library as a place of challenge and excitement he could explore by himself the world of ideas and books.

> We cannot worship frivolity and expect our young people to scorn it. We cannot scorn the life of the mind and expect our young people to honor it.
>
> — *John W. Gardner*

Editorial Jottings

The Right to Criticize In the Schools Journal

"How do you get away with printing that?" is a question occasionally asked of staff members of the *Schools Journal*. The question usually refers to an article containing suggestions for changes in one or another aspect of the Chicago public school system. The answer is that we aren't getting away with anything at all.

Such questioners do not understand the basic purpose of the *Schools Journal*. It is not a "house organ," a publication designed to puff up or glorify the local system. It is not official voice of the school administration and, indeed, carries on its inside cover a specific statement to that effect.

The *Schools Journal* is rather a professional magazine which treats those aspects of public education seeming to merit attention. It attempts to treat these matters in an honest and impartial fashion. In so doing it sometimes has "good" things to say about both local and other schools; it sometimes has things to say which may be considered not so "good."

The present school administration early granted to the editors of the *Schools Journal* the right to exercise their own best judgments concerning the suitability of manuscripts for publication. It also permits teachers within the system to contribute manuscripts without clearing through administrative channels. Because of the respect thus accorded to persons of good will, the *Schools Journal* has from time to time received and printed articles which suggest changes in present practices.

We know that these articles have been given careful consideration by authorities concerned and that in several instances improvements have resulted from them. We are proud to have been a part of such improvements.

When choosing from manuscripts which could be classified as critical in tone, we insist that the criticism be informed, constructive, and without rancor and that the alternatives suggested be feasible and well thought out. By so doing we recognize that with the freedom to publish without restraint goes the obligation to print only that which is responsible in attitude and worthy of consideration by professional persons.

In an educational system as large as that of Chicago, where sheer size dictates the establishment of a number of channels for communication, the existence of a monthly journal in which teachers can communicate ideas and suggestions without fear of reprisal is good both for the teachers and for the wellbeing of the schools.

—Irwin J. Suloway

News in Education

● *Edited by George J. Steiner*
Chicago Teachers College

Prospects for the Current Decade

The United States Office of Education has crystallized its research and thinking for the 1960 decade, and has presented some special forewarnings for school administrators. The many popular predictions for education may now be considered official.

In ten years there will be 32,000,000 pupils in elementary school, a 15 per cent rise over 1959; 12,400,000 high school pupils, a 47.5 per cent increase; and twice as many college students, representing 44 per cent of all eighteen- to twenty-one-year olds in the country.

Over three-fourths of the increase in public school enrolment will be concentrated in less than 200 large cities, where governmental improvement programs will create the new education frontier. As the nation's school districts become fewer and larger, efforts will be made to subdivide for various administrative purposes, and individual principals will take more responsibility for curriculum.

In addition, the future will see longer school days and more of them, more summer sessions, and expanded use of present facilities. Budgets will be made up in terms of specific educational objectives, and greater emphasis will be placed on the results of research for solving problems.

The Office of Education also forecasts increased public participation in local schools, together with greater interest in national and international problems by the planners. More attention will be paid to local citizen advisory committees, television and radio will bring the public into the schools, and community resources will be exploited further for teaching purposes.

Chicago High Schools Offer College-Level Chemistry

The Chicago public high schools will offer college-level chemistry next fall in cooperation with the National Advanced Placement Program.

The course will be the first science class the city's secondary schools have offered at the college level. Similar courses are being prepared in physics and biology. At present college-level courses are being offered in Chicago only in social science and in mathematics.

Students who pass the course will be eligible to take an examination that

will qualify them for college credit or advanced standing at any of the participating colleges.

The National Advanced Placement Program, started by the Ford Foundation's Fund for the Advancement of Education in 1953, has mushroomed. In 1953, eighteen high schools offered advanced courses and ninety-four colleges accepted the courses for college credit or advanced standing. In 1959-60, 890 high schools provided advanced placement courses and 567 colleges and universities recognized the courses.

Harvard University has reported that one-third of its freshmen have had college-level courses before admission. At the University of Michigan, the number of entering freshmen with experience in the advanced placement program has quadrupled in the last two years.

The new chemistry course, will be offered first in those high schools with a high percentage of college-bound students. Students will need two years of physical science and two of mathematics as a pre-requisite for the course.

University of Illinois To Bar Poor Applicants

The University of Illinois announced on March 6 that it will begin requiring applicants who were in the lowest quarter of their high school classes to pass entrance examinations.

Prospective freshmen who fail the examination will be denied admission for one year. "We have found that many students who are graduated from high schools with low grades have a better chance of succeeding at the university if they mature a little," a university spokesman said.

The requirement that the low-rank high school graduates pass the examination is a departure from the previous university policy of admitting all graduates of accredited high schools in the state.

The examination was previously given to low-rank high school graduates to indicate the chances of their success in the university. But applicants who wished to enter were admitted without delay regardless of their examination grade.

California Pays Teachers Best

California is estimated to have the highest public school enrolment and to pay the highest average teacher salary this year, according to a release in February by the National Education Association's research division.

California enrolment was estimated at 3,600,000; New York came next with 2,910,000. The association estimated Illinois, with an enrolment of 1,750,779, as sixth; Michigan with 1,664,740 as seventh; Indiana with 1,101,800 as eleventh; Wisconsin with 725,000 as eighteenth; and Iowa with 597,955 as twenty-fifth.

California has an estimated average salary of $6,700 for classroom teachers in public schools and an estimated average of $6,900 for instruction staff, including principals, in those schools. Alaska was ranked second in each category, at $6,600 and $6,700; New York was third in each at $6,200 and $6,400.

The association estimated the average salary of classroom teachers in public schools in Michigan at $5,925, making that state fifth; Illinois at $5,725 as ninth; Indiana at $5,618 as twelfth; Wisconsin at $5,075 as twenty-third; and Iowa at $4,582 as thirty-first. Chicago figures are above the Illinois averages.

Alaska and New York led in estimated current expenditure for schools per pupil in average daily attendance at $585. The median for the fifty states and the District of Columbia was $390. The lowest for any state was an estimated $217. for Alabama.

Oklahoma topped the states in percentage of elementary school teachers during the 1959-60 school year who had at least four years of college preparation, a total of 99.7 per cent. Florida was next at 98 per cent.

Based on 1950 data, results showed that Utah was first in the percentage of adults who had finished high school, at 48.9 per cent. California stood next at 46.1 per cent.

The N. E. A. research division said that it is impossible to provide exact and completely valid answers to the question of how public schools of one state compare with those of another. It adds, "On the other hand, many sets of statistics can be used as general indicators of educational quality. No single set provides a complete and final answer . . . but a combination throws considerable light on this question."

Conant to Study Teacher Education

The fourth in a series of studies under the supervision of James B. Conant will begin September 1. This involves a two-year study of the education of teachers, according to a recent announcement by the Carnegie Corporation.

Covering the education of teachers for kindergarten through grade twelve, Dr. Conant's research will require visits to college and university campuses in various parts of the country during the coming academic year. A report of the study will be given to lay boards and faculties of teacher training institutions, and will be available to the public. Among the areas to be included in the study will be the preparation of public school teachers and the criteria of employment established by local, regional, and state authorities.

The Educational Testing Service of Princeton, N. J., will administer the $300,000 grant from the Carnegie Corporation of New York City. Previous Conant projects, similarly financed, included studies of the high school, the junior high school, and reading instruction.

Comments on Reading And Science Teaching

At its meetings in Chicago the latter part of February, the American Educational Research Association advanced two ideas quite contrary to common concepts. The first concerns reading. Today's children are better readers than the children of twenty years ago, according to Arthur I. Gates, retired Columbia University professor of education. He based his contention on results of studies made in 1937 and 1957 of the reading ability of children of comparable age and intelligence.

Gates revealed that he found children at the start of the fifth grade today are six months ahead of the pupils of 1937 in reading comprehension. Fourth to sixth grade children are about three and one-half months ahead of their counterparts of twenty years ago.

Commenting on his findings, Dr. Gates said children now in school seem more adaptable, change their reading pace more readily and quickly to adjust to the difficulties of subject matter, and appear to be aware that gaining an understanding is more important than reading at high speed.

Another speaker, Nathan S. Washton, associate professor of education at Queens College, said that thousands of college students are failing to become

scientists and engineers because they encounter so many poorly taught courses in their schooling. Poorly designed courses and incompetent teaching cause students to lose interest, he said. Their failure to continue as science majors constitutes "an enormous loss to the country."

To stem this loss, Washton suggested that a search be made to discover means of giving sound guidance to prospective scientific and technical students. At the same time better teaching techniques should be developed to enable students to learn and remember scientific material, and the relationships of student personalities to the growth of scientific thinking and attitudes should be explored.

He urged that the improvement of science courses begin with a revamping of laboratory sessions. "Many colleges operate such courses on the cookbook recipe plan, and students are unable to design creative experiments."

Principals Call Attention To Role of Social Sciences

At the recent convention of the National Association of Secondary School Principals, social studies in general and history in particular were given priority in discussions.

Following earlier studies highlighting the reform of mathematics, science, foreign language, and English curricula, the association urged that a "basic core program in social studies" be required of all students from grades seven through twelve.

In addition to the required courses, the association suggested that academically able students should be offered "an elective social studies seminar" which would deal with issues in the field of history, geography, economics, and sociology, and would combine pupils from several grade levels.

Finally, it was recommended that seniors in high school should have a wide choice of electives, including such areas as contemporary problems in economics, sociology, American foreign policy, and European and Latin American history.

Urges High Schools To Change Format

High schools should abolish their formal grade levels and let students race ahead or plod along at a rate dictated by their individual abilities, according to B. Frank Brown of Melbourne, Florida, in an address to the National Association of Secondary-School Principals.

Brown contended that public education has been in a rigid lockstep for ninety years, with students grouped by age instead of ability. As they advance together from the first through the twelfth grade, the bright students become bored and the poor students fall hopelessly and helplessly behind.

Brown is principal of the nation's only ungraded high school. However, educators have been experimenting with ungraded primary schools for years, and it is catching on in many parts of the country. In place of the conventional grade levels, Brown advocates four areas of instruction, each covering a three-year span: primary, intermediate, junior high, and senior high.

Within these areas, it was stated that the talented should have room to romp and the slower student to pace himself into whatever excellence he can attain. Students who are able to excel may do so; others are encouraged to do their best.

The pace at which the student moves will depend on his intellectual development. The proposed curriculum is so fluid that a student can conceivably take

college-level calculus at the same time he takes a remedial English course in which reading is taught at the fourth grade level.

If the ungraded high school is generally adopted, according to Brown, interscholastic athletics may prove to be an early casualty. "I predict," he said, "that in the school year 1961-62, somewhere in these United States, a courageous school board will attract national attention by ringing down the curtain on varsity athletics. The effect of ungrading will be to hasten the demise."

Study of Junior College Administrators

The W. K. Kellogg Foundation has provided three grants totaling $375,000 to Michigan State University, the University of Michigan, and Wayne State University for the purpose of improving the preparation of practicing and potential administrators of community and junior colleges.

The foundation believes that the impact of this study will be felt most in the nineteen states of the Midwest where one-third of the nation's two-year colleges are located. However, students of administration are anticipated from various sections of the United States and from foreign countries.

Each of the universities will receive $125,000. Another grant of $87,500 will finance the establishment and operating expenses of a state coordinating council. The function of this council will be to examine means of facilitating cooperation between the universities in such areas as pooling of special resources and the sharing of educational features, research in the administration of community colleges, program evaluation, placement of graduates, and liaison with interested institutions and agencies.

NEA Groups Call Education Too Impersonal

The nation's schools are drifting toward "impersonal solutions" to vital educational problems. This fear was expressed by five national educational organizations in a joint statement called "Labels and Fingerprints." The statement cites trends which are squeezing individuals into a common mold.

The educators call for re-examination of rigid grade organization (the "ladder" concept) in which children advance a whole year or are kept back for a year, ability or homogeneity groupings within the graded organization, the emphasis on rote memorization, horizontal and vertical enrichment, the increasing emphasis on the "master teacher" image, and the use of outside testing instruments.

The five organizations are the American Association of School Administrators, the Association for Supervision and Curriculum Development, the National Association of Secondary Principals, the Department of Elementary School Principals, and the Department of Rural Education. All are parts of National Education Association.

The school program must instill in the individual "the desire to find himself in a group, not busy himself in it," the statement concludes.

Statistical Picture Of U. S. Education

The classroom shortage in the nation's public schools rose from 135,200 to 142,100 during the past year, the U. S. Office of Education reported recently. The shortage includes 66,100 classrooms needed to relieve overcrowding and 76,000 to replace unsatisfactory facilities.

Meanwhile, public school enrolments increased to a record 35,300.000 pupils,

24,500,000 in the elementary schools and 11,800,000 in secondary schools. This is an increase of more than a million over last year. The number of classroom teachers rose to 1,410,000 including 861,000 in the elementary schools and 549,000 in the high schools. This is 55,000 more than last year's total.

Based on reports from the fifty states and the District of Columbia, there are about 685,000 pupils on half-day schedules. Altogether, there are 1,868,000 pupils in excess of normal capacity in crowded classrooms, on curtailed schedules, or both.

The report indicates that 69,400 classrooms were built during the last year, about the same as in the previous year but below the peak of 72,100 completed in 1957-58. Approximately 69,600 are scheduled for completion during the current school year.

An encouraging note is that the number of classroom teachers who have not met full certification standards dropped by 5,500 or 5.6 per cent over the last year. There are still, however, 91,000 such teachers.

NSTA Studies Science Facilities

The National Science Teachers Association is launching a major science facilities study to determine the physical setting and tools which must undergird a topnotch school science program all the way from kindergarten through junior college. The study is supported by a grant from the laboratory equipment section of the Scientific Apparatus Makers Association, which will look to NSTA for guidance in planning requirements of school science programs in the next decade.

NSTA interest in the study grew when recommendations for modernizing the science curriculum came as a result of such national studies as the Physical Science Study Committee and the Biological Sciences Curriculum Study. A key element in putting some of these recommendations into effect in many schools is the physical aspect—inefficient classrooms, poorly designed buildings, or lack of necessary science equipment.

The committee will study these physical facilities along with other related questions such as expected future enrolments in science, supply of qualified science teachers, new teaching methods, and teaching aids.

Scholarships Go To Wrong Persons

Most colleges pay mere lip service to the ideal that scholarships should go to needy students who would otherwise not be able to attend college, says Dr. John L. Holland, research director of the National Merit Scholarship Corporation.

He contends that only a "few scholarship winners actually need financial assistance to attend an accredited college. A large proportion of our limited scholarship funds are going to relatively well-to-do students who want to attend expensive colleges." Holland blames this situation on the fact that a few colleges control a large proportion of the scholarship funds.

Writing in the latest issue of the Columbia *Teachers College Record*, Holland also puts the lie to the popular conception that the prestige schools—the expensive colleges— are necessarily the best. He says that a college's productivity may depend more on the quality of its incoming students than on any other attributes of the college itself.

Current Periodicals

● *Edited by John M. Beck*
Chicago Teachers College

"We Leave Teachers in Classrooms." By William Plutte. *The American School Board Journal*, March, 1961.

A principal of the De Anza High School in Richmond, California, reports on a successful experiment. High school teachers in Richmond, California, were relieved of student supervision assignments. Valuable teaching time was saved by utilizing noncertificated personnel to supervise a variety of school activities. Although it was granted that supervision can be a fine teaching situation, the new policy was justified on the basis of greater educational values to be realized from such expenditure of the taxpayer's dollar.

The administrative wisdom in this innovation is similar to that in the recent teacher aide experiment. The qualifications of the nonteacher supervisor called for a minimum of a high school education, good work rating, neat appearance and, if possible, some experience with youth work. In addition, selected student supervisors were expected to complete the same five-day orientation program presented to new teachers. The program saved the district money. The teaching load was reduced. The program adopted by the De Anza High School in 1959 has spread to four other high schools in the area.

"A Little Extra Push." By Maya Pines. *The Reporter*, March 16, 1961.

Several hundred adult volunteers have been helping to educate over a thousand pupils in New York City's overcrowded elementary and junior high schools. The School Volunteer program is sponsored by the Public Education Association and the Board of Education. Young wives without children and retired folks are cooperating in the project.

The volunteers give a minimum of one half-day a week to aid pupils with personal matters as well as academic subjects. Many useful tasks have been undertaken in fifteen schools, providing relief for the overburdened teachers. Skillful volunteers have aroused children's interests in art and reading, helped individual pupils with difficulties in arithmetic or English, and directed or supervised various extracurricular activities. Still others have assisted in clerical and routine classroom chores. The school volunteers office is responsible for the selection and orientation of new volunteers. It is claimed that the additional personal attention made possible by the volunteers probably has been the difference between keeping pace in class and drifting into delinquency. Teachers have found the program most beneficial.

"Scholastic Success of College Freshmen from Parochial and Public Secondary Schools." By Robert E. Hill, Jr. *The School Review*, Spring, 1961.

The main purpose of the investigation reported in this study was to compare the scholastic success, with scholastic aptitude controlled, of 103 graduates of public schools and 103 graduates of parochial schools. However, the available data made other comparisons possible. In brief, these conclusions were warranted. College freshmen who graduated from parochial and public secondary schools did not differ significantly in socio-economic class or in persistence in college. The parochial school group tended to be superior to the public school group in scholastic aptitude.

Although differences favored the public school group, the two groups did not differ significantly in scholastic achievement when scholastic aptitude was ignored. But when scholastic aptitude was controlled, there was a statistically significant superiority in the scholastic achievement of the public school graduates over the parochial school graduates. The "inferior performance" of the parochial school group was related to curriculums emphasizing verbal skills and possibly to curriculums, teaching, and supervisory methods which do not prepare students to perform at peak efficiency in the "relatively unstructured college situation."

"A Course of Study on File Cards." By Daniel J. Carnevale. *School Shop*, March, 1961.

Teachers who are searching for more effective ways to organize classroom procedures will find helpful suggestions in this article. The file card system is described as a "time saver, a temper saver, and a promising and adaptive teaching aid." Although the author has used the card system in mechanical-drawing courses, the system could be adapted easily in any subject where lesson plans are used. Each 4 x 5 index card contains the basic information for the presentation of a lesson. The lessons are correlated and coordinated with other instructional materials. One important feature of this method of indexing course content is flexibility. Courses may be revised easily to improve or keep content up-to-date.

"A Comparative Study of the Mailed Questionnaire and the Interview in Follow-Up Studies." By Robert M. Jackson and T. W. M. Rothney. *The Personnel and Guidance Journal*, March, 1961.

A thorough study was made to determine the comparative contributions of two procedures for follow-up purposes: the interview and the mailed questionnaire. In general the results of the statistical analysis re-affirmed the commonly known weaknesses of the questionnaire. The analysis of the differences in response to mailed questionnaires and interviews revealed that:

1. The interviews brought forth significantly more complete answers than the mailed questionnaires.

2. The interviews elicited a significantly greater number of responses which could be interpreted as evidence of adjustments and problems of subjects.

3. The subjects responded to questions that called for facts more often than to those which required evaluations.

4. There were more responses to items that asked for facts or yes-no check answers than to open-ended questions.

5. The length of the mailed questionnaire influenced the number of completed items. A significantly smaller

percentage of responses was found on each succeeding page of the mailed questionnaire.

"Scope and Sequence of Geographic Education in the Modern School Curriculum Grades Four Through Twelve." By Bernice M. Cosper. *The Journal of Geography*, February, 1961.

In this résumé of the writer's dissertation study, research and empirical judgments of investigators were analyzed in four closely related areas of the geography curriculum: (1) curriculum design; (2) vertical sequence of the broad categories of systematic geography; (3) grade placement: (4) scope and sequence of selected geographic concepts and generalizations. This study of geographic education was prompted by the strong belief that there is a lack of precise statement concerning: (1) geographic concepts and generalizations, (2) understandings and attitudes, and (3) basic skills which should be developed at each academic level from grade one through college.

The source of information on the problems raised included 266 teachers from 149 city schools in 44 states, 5 provinces in Canada, and the District of Columbia. The results of this lengthy study produced several recommendations to improve the modern curriculum in geography. One recommendation was for every school system to have a comprehensive and detailed curriculum guide showing a well-planned continuity and content of geographic education for grades one through twelve. More attention was directed to the maturity and interests of children at each of the grade levels in determining curricular concepts and skills.

It was also recommended that the overcrowding of the elementary curriculum should be alleviated by continuing the geographic readiness program of the primary grades through the fourth grade. The upper elementary grades would be concerned with regional geography. At the high school level, the curriculum called for the global aspects of geography, physical, economic, and political, emphasizing the status of United States in international affairs. This extensive geographic analysis provides an excellent guide for curriculum workers.

"Do We Meet The Personal-Use Objectives of Bookkeeping?" By Robert G. Soule. *Journal of Business Education*, February, 1961.

A strong case is made for presenting the beginning bookkeeping course in high school as a practical tool both in vocational and personal life. Such a course meets the varied needs of individuals and families. The author stresses the value of allocating the necessary time during the school year to provide instruction in some of the aspects of bookkeeping related to the personal-use needs of the students. Personal-use instruction should include banking procedures, knowledge of such terms as net profit and assets, and development of an appreciation of the American business system. In addition, a special supplementary unit on income tax should be added to the conventional course. To emphasize the practicability of the course, projects are suggested which encourage students to apply bookkeeping theory to daily living in school and in the home. The vocational and personal-use objectives would not require separate courses in bookkeeping. As the author points out, the individual who learns bookkeeping for vocational purposes also needs the personal and consumer knowledge available in the course.

"When Should Shakespeare First Be Taught in the Schools?" By Bernard Handwerker, *High Points*, March, 1961.

The interesting observations and useful suggestions made by the writer are based on his experiences in a New York City junior high school. The teaching of Shakespeare to acquire the full meaning of ideas, appreciate the literary talents, and enjoy the poetic style, is said to require achievement levels found in an average ninth year class or a bright eighth year class.

At this level the writer believes that *Julius Caesar* should be the play used for introducing Shakespeare. The play's "blend of action and conflict, ideas on government, and supernatural stage effects" combine to capture the childrens interest and open the way to further study of Shakespeare's masterpieces. Prior to the oral reading of the play, students should be prepared by a discussion of biographical and historical background and the Elizabethan theater.

After the play is read, the structure of the play should be examined from a creative writing point of view. As a result of the study, students should acquire an awareness of the exceptional passages. Parts of the play most appealing to children could be memorized. For the culminating phase, the writer suggests compositions, dioramas, models of theaters, paintings and drawings, and other construction projects. The most desirable culminating activity would be a visit to a live performance of the play.

"The Three E's: Examination, Experimentation, and Evaluation." By Paul E. Schiele, Jr. *The Science Teacher*, February, 1961.

A tested sixth-grade unit in space science is described in this brief article. The class began the space unit by first getting a concept of the vastness and size of the universe. Then followed an extensive investigation of the instruments which scientists use in exploring outer space. The preliminary stage also included a class discussion to determine specific problems to be undertaken in the unit. Committees of two or three were established according to related interests in a specific area of man's space investigation. The pupils worked directly on the construction of models, instruments, planets, and other space equipment planned for the unit. After the construction phase was completed, each committee prepared a class report with a demonstration of their project. As the culmination of the space study unit, the class viewed a color film that illustrated and explained the function of space instruments. The scientific approach to the unit made it possible to introduce many basic principles of space.

"The Skiles Program for Reading Improvement." By Francis X. Vogel. *The Clearing House*, February, 1961.

To meet the various demands for improved reading, teachers have developed a promising comprehensive reading-literature program for the Skiles Junior High School in Evanston, Illinois. The reading program, introduced in 1959 as an experiment, has five major characteristics. First, reading instruction is provided for all students. Second, reading and literature instruction is given to groups of students on the basis of their ability and achievement. The program provides for the accelerated, the underachieving, the average, and the slow learner. Third, reading is taught as a subject within the curriculum. Fourth, in-service training for teachers is provided as a part of the program. Fifth, a reading clinic provides individualized instruction for the most severely re-

tarded students. The program is said to be too new to be evaluated thoroughly, but there is no doubt of its acceptance by the teachers, students, and parents.

"Good Principal — Effective Leader." By Vynce Hines. *Overview*, February, 1961.

University of Florida research in leadership over the past six years has been successful in helping school principals to change their perceptions of themselves and of their jobs. A one-year program for principals produced gains in effective leadership. Effectiveness was increased by the special in-service program. However, the experiment indicated that the administrative behavior of the principal did not seem to be related to his years on the job and to the previous amount of graduate study completed. Another revelation was that women as a group excelled men as a group in the measures of effective elementary school principalship.

Descriptions of the effective principal emphasized democratic behavior in decision-making in matters of policy or program, in keeping open channels of communication, in respecting the dignity of individuals or groups. In brief, the effective leader "will not be running the show singlehanded." Rather the effective leader will have helped those around him to "acquire competence in decision-making and to develop self-direction." The final test of this leadership is the degree others have been enabled to define and make progress towards "mutually satisfying goals."

"A New Approach to the Teaching of Physics." By G. H. Cannon. *The BC Teacher*, March, 1961.

The Physical Sciences Study Committee, under the chairmanship of Professor J. Zacharias of M.I.T., has developed a new approach to the teaching of physics. The revision committee had the close support of active scientists and teachers in secondary schools and colleges. What makes the new program particularly appealing is the fresh approach to the investigation of fundamental ideas in physics. Understanding ideas is emphasized rather than memorization of facts. In laboratory work, the experiments are really experimental, not demonstrational. In this way concepts are developed not just asserted. The physics course has been designed for high school students. The number of participating schools has increased from 270 in 1958-59 to 1,100 in 1960-61. An in-service training course based on the new methods has been planned for this summer by the University of British Columbia.

Early results and teacher reactions indicate the objectives are being attained. As a part of the project, the committee has also developed simple laboratory equipment, produced course films, constructed achievement tests, and written supplementary reference books. It is hoped, too, that the revised course will lead back to the teaching of science rather than the teaching about science.

New Teaching Aids

● *Edited by Joseph J. Urbancek*
Chicago Teachers College

Films

Sense Perception, Part I. The Wonder of the Senses. 16mm sound. Color, $220; rental at $10 the first day and $2.50 each day extra. Educational Collaborator: Irwin A. Moon, Moody Institute of Science, 11428 Santa Monica Blvd., Los Angeles 25, Calif.

This film starts out to explain the several senses but omits reference to proprioceptive and visceral phenomena. There is some beautiful photography of natural scenes, events, and phenomena to illustrate vision; and the recorded sounds were interesting and delightful. Taste, smell, and touch were illustrated by commonplace but appealing situations. Perceptive areas of the brain (cerebrum) were mentioned as being interpretative.

In introducing the reversing prism or lens system some poor language was used. Other lapses are evident. The nerve impulse involves much more than simply an electric current. The bones of the middle ear are not "very precisely designed to transmit sound waves," but are an evolutionary adaption of previously existing gill and jaw suspension systems. This reviewer would hesitate to refer to the cochlea or any portion of any sense organ or the conducting system as "an electronic device."

The demonstration of the mercury dish smeller or odor detector was simply a surface tension phenomenon resulting from chemicals exuding from the surface of a cut onion (primarily volatile oils). The use of the mechanical odor detector almost deceived this reviewer into thinking that he was watching a certain obnoxious television commercial which has received a cease and desist order from Federal regulative agencies. James M. Sanders

Sense Perception, Part II. The Limitations of the Senses. 16mm sound. 28 minutes. Color, $220; rental one day $10, extra days $2.50. Educational Collaborator: Irwin A. Moon, Moody Institute of Science, Los Angeles 25, Calif.

This film is a continuation of the preceding film and is based on the philosophy that things may not always be as they seem or appear, due to certain limitations of the interpretative systems, especially with reference to optical illusions. A few well-known psychological phenomena were illustrated very well, and also some instrumentation. The thesis developed is that man has made great *scientific advances*, more in the last 50 years than in the previous 5,000, but that he has not done so well in moral and spiritual responsibility, in spite of capacity or ability for such progress. This reviewer is not entirely sure of what is meant by "absolute values" and "fixed laws" in morals as applied to all of human societies.

The final sequence of reactions of an outfielder watching and snagging a fly ball is a little unrealistic. Schematization of neurone stimuli in the brain is strongly suggestive of a pinball machine.

The physiological coverage of this film is less wide than that of the preceding. It appears that either film would be more appropriate for junior and senior high than the college level. Basic physiology is done better in other films, exclusive of the present moral implications. James M. Sanders

Wonder of Our Body. 1 reel. 16mm sound. 12 minutes. Black and white, $55; color, $105. Moody Institute of Science, Los Angeles 25, Calif.

This film is one of the Wonder World film series based on the conversations of Uncle Bob of the Fix It Shop and his young neighborhood friends. It introduces the similarities between the human eye and a camera and the intricate system of transfering sound vibrations in the ear.

Other body systems, the "muscular pump," the sweat glands, are briefly mentioned as well as some suggestions for taking care of these "houses we live in."

This film might be more suitable as an introduction or motivation for the middle grades as it is limited in number of concepts presented, the quality and number of the charts used, and the information included.

Muriel Beuschlein

Wonder of Water. 1 reel. 16mm sound. 12 minutes. Black and white, $55; color, $105. Moody Institute of Science, Los Angeles 25, Calif.

One of Wonder World film series developed around Uncle Bob of the Fix It Shop and young neighborhood boys, this film presents elementary facts about water. The demonstration of the electrolysis of water adds a valuable contribution to the explanation of the chemical formula H_2O.

Development of understanding of the water cycle, the many uses of water, and its importance as a natural resource are briefly treated as Uncle Bob talks to his friends. This does not seem to be the most effective use of footage. Both the topic and the concepts presented are suitable for middle elementary grades.

Muriel Beuschlein

Mystery of Time. 1 reel. 16mm sound. 40 minutes. Color, $340. Moody Institute of Science, 11428 Santa Monica Blvd., Los Angeles 25, Calif.

This film is designed to illustrate the theory of relativity in a simple way. The first half of the film is devoted to portraying events with the high speed and time lapse camera; the former having the effect of stretching out time, the latter of compressing it. This part of the film very successfully illustrates the point that events such as the splashing of milk, the take-off of a housefly, sunset and moonrise, and a football game may appear very different to us if viewed on a different time scale.

The second half of the film illustrates by special photography the contraction of length and slowing of time that the theory of relativity predicts would occur at speeds close to that of light.

A few moral and spiritual conclusions are drawn at the close of the film which are rather unrelated to the rest of its content. They are presented, however, in a nonsectarian and inoffensive way.

The film could be used in high school or college, and possibly even in elementary school. It would be ideal for high school assemblies. It holds student attention and arouses student interest. It gives concrete illustrations of quite abstract theories in a most effective way. F. W. Dobbs

Wonder of Reproduction. 1 reel. 16mm sound. 12 minutes. Black and white, $55; color, $105. Moody Institute of Science, Los Angeles 25, Calif.

This film presents a brief outline of the life history of the Siamese fighting fish and the Egyptian Mouth breeder. The photography is good, color good, sequences well chosen, and no distracting music. The commentary follows the attitude, "Ain't nature wonderful" rather generally deplored in teaching films. With respect to the male Betta the commentator remarked the male parent "decided it's time to raise a family" —and of the Egyptians, when the parents "have decided its time to decrease their family." A reference to heredity, instinct, hormones, light, or almost any other possibility would have been better.

With respect to fertilization, it was suggested that the male "covers eggs with a fluid which"—a concept which puts us back to, or perhaps even before, Aristotle.

While it is true that minnows may be used as aquarium fishes, it is almost certain they will not reproduce (the theme of the film, remember?). Even Gambusia, one of the most likely reproducers, is difficult to raise in an aquarium. Many minnows also have high oxygen requirements, necessitating pumps and perhaps filters. The film and information might be suitable for grades 4 and 5 but this reviewer would hesitate in recommending it as offering much for grades 6 and 7. It may be used in science, social studies and health classes, as suggested by the distributor. James M. Sanders

Stop Driving Us Crazy. 1 reel. 16mm sound. 10 minutes. Color, $125; rental, $6. Educational Collaborators: National Safety Council and the President's Committee on Traffic Safety. Available through the Association Films, Inc., 561 Hillgrove Avenue, La Grange, Ill.

An animated film with an original jazz score on the subject of safe driving. A very delightful and entertaining story depicting

an outer space character's arrival on earth and his view toward the earthly human's mad driving habits. Its appeal to teenagers and adults is based on ethical and moral values rather than the content of the usual driver safety films. A good film for motivation purposes in a driver education course.

Dorothy Kozeluh

Let's Schottische. 1 reel. 16mm sound. 12 minutes. Color, $125.

Let's Polka. 1 reel. 16mm sound. 7 minutes. Color, $80. Educational Collaborator: Margaret Patrick. Available through Kuht Film Producers, Box 626, University of Houston, 3801 Cullen Blvd., Houston 4, Texas.

These films demonstrate, with a typical group of elementary school pupils, the skills of the polka and the schottische, beginning with the simplest step and proceeding to the finished rhythmic skill of these patterns. The teacher explains through simple procedures how to exercise these movements without too much difficulty. Ideal films for physical education student teachers, they can also be shown to elementary school children as an introduction to these dances.

Dorothy Kozeluh

Filmstrips

China: Communism in Asia. 59 frames. Black and white, $2.50. The New York Times Co., New York 36, N. Y.

Here we see Communist China following aggressive policies which pose a grave threat to world peace. Current social, economic, and political problems of China as they affect the Asian democracies, the United States and its allies, and the U.S.S.R. are depicted and explained in such an able and interesting manner that high school and college classes, as well as general adult groups, will obtain an understanding of the gravity of the problem which this Asiatic colossus presents to the world.

Questions concerning the relations of Communist China to SEATO, to the U.S.A., to the U.S.S.R., to U.N., to Africa, to other Asian Countries, and to Cuba are raised in a challenging manner. Accompanying the filmstrip is a discussion manual which poses specific questions for class discussion. A selected bibliography will prove helpful for the teacher. Highly recommended as a portrayal of life behind the "Bamboo Curtain."

Henrietta H. Fernitz

The Development of the American Republic. Seven filmstrips, 47-50 frames each. Color, $6 each, $37.80 the set. Produced by the Society for Visual Education, Inc., 1345 W. Diversey Pkwy., Chicago 14, Ill.

This series of seven filmstrips is designed to depict the highlights of the history of the United States from 1900 to the present. Beginning with the Boxer Rebellion, the United States has been involved in international events in spite of attempts (e.g., following World War I) to withdraw into a shell of isolation. This series, then, emphasizes the major events in the emergence of the United States to a position of world leadership. It would seem to this reviewer that each set would be an excellent device to introduce a period of history prior to more careful study and elaboration and for review at the end of the study. The quality of the art and color of the strips is very good. Recommended for grades nine through twelve.

William H. Strawn

Space and Space Travel. Four filmstrips. Color, $6 each, or $21.60 per set. Educational collaborator: John Sternig. Produced by Society for Visual Education, Inc., 1345 Diversey Pkwy., Chicago 14, Ill.

Leaving the World. 41 frames. Pictures of some of the artificial satellites, rocket development, and the speeds required for orbit and escape. Introduces space terms such as *ellipse* and *apogee.*

Current Events in Space. 47 frames. Lists the satellites put into space as of January 1959, shows the idea of rocket stages, tracking, telemetering, and how the force of gravity decreases with distance from the earth.

Man in Space. 47 frames. Outlines the training of astronauts, the problems of weightlessness, food, radiation, and waste disposal in space.

Space Travel A. D. 2000. 52 frames. This strip shows that the enormity of space precludes extensive exploration even with far better equipment than we now consider possible, but that limited solar system exploration is probable. It also discusses possible future rocket systems that do not depend on chemical fuels.

This series would be most appropriate for the middle to upper elementary school years. The frames on orbits, showing that all thrown or projected objects travel in a kind of orbit are particularly good. A series such as this would provide a school with an authoritative but lively substitute for Sunday-supplement speculation.

John J. Bowen

Important New Books

● *Edited by Louise M. Jacobs*
Chicago Teachers College

For Teachers and Supervisors

An Outline of Experimental Education. By Robert R. Rusk. St. Martin's Press, 175 Fifth Ave., New York 10, N. Y., 1960. Pp. 118. $3.50.

This brief work affords the graduate student as well as the general reader a concise résumé of years of educational experiments. For the advanced student, however, the volume at best serves as an overview of the highlights in experimental education. Techniques and instruments of research are described. Evidence is cited on such important educational issues as the desirable school-entering age, the most efficient size of school and of class, the methods of grouping pupils, the conditions of learning, and discipline. In fact, every major field of education has been considered. The treatment of a complex subject is commendably simple, reducing professional jargon to a minimum.

John M. Beck

Reading and the Psychology of Perception. By Hunter Diack. Philosophical Library, 15 E. 40th St., New York 16, N. Y., 1960. Pp. 155. $6.00.

The point of this treatise is that in teaching reading it is not sufficient to follow Gestalt theory in directing the child's attention only to words, sentences, and larger "wholes." Full consideration must also be given to letters. This is not to be construed as simple phonics or emphasis on the sounds associated with letters. The author insists that letters have meaning or "signification," built-in directions so to speak, for determining the recognition, pronunciation, and understanding of words. This aspect of reading too must be taught. Few if any teachers would quarrel with this view.

David Kopel

The Community Junior College. By James W. Thornton, Jr. John Wiley and Sons, 440 Fourth Ave., New York 16, N. Y., 1960. Pp. 300. $5.95.

From his wide background of experience, the author covers adequately, in clear, concise style, the junior college movement. On controversial issues in this area, he accepts the positive and more optimistic views of the majority of the leaders: he favors the "open door" policy of non-selective admissions; at least one-third of the curriculum devoted to general education which would best be taught through four or five integrated, especially-designed courses; and a large measure of terminal education oriented to the needs of the "community" in which the college is located. The author is both a good scholar and an ardent apostle of the community junior college.

Charles R. Monroe

An Encyclopedia of the Book. By Geoffrey Ashall Glaister. Illustrated by Grafish Uppslagsbok. World Publishing Co., 31 W. 110th St., Cleveland 2, Ohio, 1960. Pp. 484. $17.50.

An extraordinarily comprehensive book containing 2600 definitions alphabetically arranged and over five hundred illustrations. While most entries are short, such basic items as bookbinding, paper-making, and photogravure receive fuller treatment. It is a history of the world of books and a reference volume for the trade and the high school student or adult reader. There is no American or British equivalent work of similar scope.

Donald Racky

For the Kindergarten and Primary Grades

The Dot. By Cliff Roberts. Franklin Watts, 575 Lexington Ave., New York 22, N. Y., 1960. Pp. 36. $2.95.

In his first book for children the author initiates an interesting evolution of art forms to present concepts about the world in which we live. Dots, curves, circles, and rectangles may represent houses, towns, people, and the globe. The illustrations are unusually bold and impressive; the text is printed in capital letters throughout. Refreshingly new in format and design, it is recommended for first and second grade reading. Bertha Z. Albrecht

Nomi and the Lovely Animals. Written and illustrated by Louis Slobodkin. Vanguard Press 424 Madison Ave., New York 17, N. Y., 1960. Pp. 30. $2.50.

This delightful story of a little girl who wished to have a pet is told in rhyme. Her mother said it must not be too large or too tall. The illustrations are predominately red and black, delicate, and without unnecessary details. This I Can Read Book will capture the interest of the small child. Recommended.
Marcia Randolph

Something New at the Circus. By Hannah Simons. Illustrated by Margaret Bradfield. Abingdon Press, 810 Broadway, Nashville 2, Tenn., 1960. Unp. $2.00.

Kindergartners told the first grade it was about "the sheep told the pig and the pig told the goose." First grade told second grade it was about a circus and "the pictures are swell with lots of colors, and wait till you see the big picture with the animals on top of each other!" Second grade said to third grade, "We can read it ourselves, or nearly!" Third grade said, "Go ahead and read it. It's a silly story." But everybody said they liked it. Ruth Dennis

My Family. By Miriam Schlein. Illustrated by Harvey Weiss. Abelard-Schuman, 404 Fourth Ave., New York 16, N. Y., 1960. Pp. 40. $2.75.

This is a picture album of a little boy's family. All his uncles, aunts, and grandparents are pictured. The text not only explains the relationship of the members of a family but also describes the affection and loyalty that unite them. "All these people are my family. I am something to them. And they are something to me."
Elizabeth P. Davey

The Little Old Train. By Margaret G. Otto. Illustrated by Erik Blegvar. Alfred A. Knopf, 457 Madison Ave., New York 22, N. Y., 1960. Unp. $2.00.

Once upon a time there was a little old train that went whizzing along looking like one of the Toonerville trolleys of yesteryear. The plot centers around an immovable cow on the tracks. Third graders will find this book interesting and readable. The black and red cartoon-like illustrations are meticulously executed to make the events seem believable. The train noises echo long after the story ends. Recommended for a change of pace in children's reading.
Marcia Randolph

Torchy and the Magic Beam and *Torchy in Topsy Turvy Land.* By Roberta Leigh. Illustrated by Patricia Barton. Taplinger Publishing Co., 119 W. 57th St., New York 19, N. Y., 1960. Pp. 38 and 39 respectively. $2.50 each.

The beginning of the first book has interest and possibilities, but as the story proceeds, magic pulls it in apparently uncontrolled directions. The events are so numerous and giddy that it is difficult to give a synopsis. When all the irrelevant details are discarded, the plot emerges something like this: using wax and a flashlight battery Mr. Bumble-Drop creates a doll that comes to life, nay super-life, and travels to a star to rescue some toys. The star happens to be Topsy Turvy Land and the toys do not want to be rescued. In the second book, the author gives a brief summary of the first and then continues along the same skittish vein, describing Fru-Town where the houses are made of oversized fruit with the insides scooped out, where Squish goes around squirting water at everyone, and similar incidents *ad nauseam.* The illustrations are gay. Meant for primary children.
Mabel G. Hemington

Sara and Hoppity and *Sara and Hoppity Make New Friends.* By Roberta Leigh. Illustrated by Marion Wilson. Taplinger Publishing Co., 119 W. 57th St., New York 19, N. Y., 1960. Pp. 37 and 38 respectively. $2.50 each.

Sara, whose parents own a toy repair shop, spends her last sixpence for a one-legged, broken, old doll which has a fascinating appeal to her. And a good investment it is, for after Hoppity is cleaned, mended, and clothed, he becomes Sara's best friend who cannot speak much more than "tiddley-tum," but Sara understands everything he says! And what is more, she can blame her mischievousness on Hoppity.

These two books are far superior to the author's *Torchy* stories. Here the author gives us just a tantalizing bit of magic with a normal, sometimes naughty, but always delightful little girl. The plot is feasible; the characters, natural; the charming illustrations are colorful and full of action. Good for primary children.
Mabel G. Hemington

For the Middle Grades

Junior Science Book Series. Junior Science Book of Electricity. By Rocco V. Feravolo. Illustrated by Evelyn Urbanowich. *Junior Science Book of Flying.* By Rocco V. Feravolo. Illustrated by Dennis McMains. *Junior Science Book of Stars.* By Phoebe Crosby. Illustrated by William E. Preston. Garrard Press, 510 N. Hickory St., Champaign, Ill., 1960. Pp. 61, 65, and 64 respectively. $2.25 each.

The principles of static and current electricity are accurately developed in the first book, one of a series of five. An outstanding feature of this text is the numerous experiments and activities explained and illustrated in detail. The drawings clarify any difficulties encountered with the scientific vocabulary.

The principles of flight are made meaningful by means of numerous activities which are explained and illustrated with such clarity that they may be executed without adult assistance. This book is basically devoted to the functioning of propeller operated planes and to an explanation of the forces of lift, thrust, gravity, and drag.

The book about the stars is scientifically accurate and has an attractive format. The scientific vocabulary demands mastery of word analysis and phonetic skills in order to read independently. The development of the solar system is presented in addition to the main portion which deals with stars and is accompanied with illustrations of constellations. An excellent supplemental book with a high interest level for the below average middle and upper grade reader.

Donald W. Bayer

A Book to Begin on Lights. By Margaret C. Farquhar. Illustrated by Tom Funk. Holt, Rinehart and Winston, 383 Madison Ave., New York 17, N. Y., 1960. Pp. 46. $2.50.

This is a child's history of man's attempt to light his way through the ages, told simply and illustratively. From the past when torches lighted early man's cave into a future with lighted walls that change color, a procession of lighting devices are described. Use of candles, kerosene, carbon arcs, and electricity attest to the progress toward more efficient, economical, effective use of man-made light. The nature of the content suggests use with upper primary and middle grade children. Understanding civilization through lighting inventions makes this book an excellent resource for science and social studies classes.

Vinita Beuschlein

The First Book of Mining. By Patricia Maloney Markin. Illustrated by Mildred Waltrip. Franklin Watts, 575 Lexington Ave., New York 22, N.Y., 1960. Pp. 69. $1.95.

This beautifully illustrated and well-mapped little book gives the fifth to eighth grader a good introduction to the history of mining, how ores are formed, the birth and growth of a mine, and the strange world of the underground. It concentrates on the huge iron mines of Minnesota—the author is from that state—and closes with the theme that mining knowledge should be made available to underdeveloped countries so that wise utilization of mineral resources may help to make "life better for people all over the world."

C. Wallace Dierickx

Paper. By Jerome S. Meyer. World Publishing Co., 2231 W. 110th St., Cleveland 2, Ohio, 1960. Pp. 91. $3.00.

The history of paper making from its invention in 105 A.D. to the present time, its manufacture and its importance in our modern world is told in a way which will fascinate children from sixth through tenth grade. The various manufacturing processes are described in detail; the differences between the finest, thinnest writing paper and the heaviest paperboard used in boxes and cartons for merchandising are carefully explained. Excellent full-page photographs accompany the fine word descriptions.

Samuel L. Dolnick

Abraham Lincoln, Courageous Leader. By Lillian Bragdon. Illustrated by Edward Shenton. Abingdon Press, 810 Broadway, Nashville 2, Tenn., 1960. Pp. 125. $1.75.

A rather sketchy biography of Lincoln highlighting the personal aspect of his life rather than the political. Although the story is written for middle grade children, the vocabulary is frequently too difficult. This book might be suitable for supplementary reading for upper grade children familiar with the Civil War period. The black and white illustrations are excellent.

Mary Eldridge

Jane Addams, World Neighbor. By Miriam Gilbert. Illustrated by Corinne Boyd Dillon. Abingdon Press, 810 Broadway, Nashville 2, Tenn., 1960. Pp. 128. $1.75.

The significant milestones in the life of the heroine of the slums are appealingly recounted in this story told especially for younger girls. Beginning in Jane's childhood as a sickly, unattractive little girl, the narrative carries her through her development into an energetic, determined woman, whose achievements made her world-famous. The simple, chatty style makes this a very suitable story for the middle grades, where the inspirational theme might find its greatest audience.

Julienne Couleur

The Poetry-Drawing Book. By William Cole and Julia Colmore. Simon and Schuster, 630 Fifth Ave., New York 20, N.Y., 1960. Pp. 66. $1.95.

Here is a delightful type of creative activity that presents a variety of visually evocative poems by Edward Lear, Rachel Field, Peggy Bacon, Robert Louis Stevenson, and others to which children may give rein to their imaginations. Blank pages are provided with each verse so that the pupils may draw and color their ideas in their own way. It is indeed encouraging to find a book like this and to recommend it most highly.

Jane Neale

Typewriter Town. By William Jay Smith. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N.Y., 1960. Pp. 32. $2.95.

A nonsense book which may appeal to the reluctant reader. Children who have a typewriter available will want to create patterns of their own after seeing the illustrations possible with the use of the machine and their own ingenuity. Color adds interest to the patterns. The verses are nonsense with a bit of sense here and there. Imagination runs rampant. Marie Z. Cole

Boyhoods of Great Composers. By Catherine Gough. Illustrated by Edward Ardizzone. Henry Z. Walck, 101 Fifth Ave., New York 3, N.Y., 1960. Pp. 53. $2.50.

This book presents incidents from the boyhood of six composers whose music is played and loved throughout the world today. Each of these musicians represents a different period in music history, ranging from seventeenth century Handel to twentieth century Elgar. As an interesting introduction to the lives of great composers, this book is a fine addition to the music appreciation literature for grades three through six. It is written in a clear, vivid manner and the delightful illustrations do much to enhance its quality. Rose Klowden

The Willow in the Attic. By Dana Faralla. Illustrated by Rita Fava. J. B. Lippincott Co., E. Washington Sq., Philadelphia 5, Pa., 1960. Pp. 96. $3.50.

A very charming story written with rare sensitivity and beauty that will appeal to children who enjoy nature and make-believe. There are many suggestions for indoor projects with scissors, paper, and paints. A good family story for boys and girls in the third and fourth grades.

Mary T. Prendergast

Cooking Fun. By Barbara Guthrie McDonald. Illustrated by Vee Guthrie. Henry Z. Walck, 101 Fifth Ave., New York 3, N.Y., 1960. Pp. 72. $3.00.

A wealth of information for the beginning cook is contained in this seventy-two page book. In addition to acquiring skill in making snacks, the child will learn how to measure, tell time, and compute fractions. The directions are stated simply and accompanied by green and red pictures.

Margaret T. Racky

Fairy Tales Series. Retold by Barbara Ker Wilson. *Fairy Tales of Ireland. Fairy Tales of Mexico.* Illustrated by G. W. Miller. *Fairy Tales of India.* Illustrated by Rene Mackensie. *Fairy Tales of Russia.* Illustrated by Jacqueline Athram. E. P. Dutton and Co., 300 Fourth Ave., New York 10, N.Y., 1960. Unp. $1.50 each.

Each book of the series contains four short, little known stories. The style of each is simple, but in the retelling they have lost most of their original charm and feeling. The illustrations are quite pedestrian, lacking vigor and imagination. The bindings are poor, making the books inadequate for school or library use. Margaret S. Sandine

Ten Thousand Desert Swords. By Russell Davis and Brent Ashabranner. Illustrated by Leonard Everett Fisher. Little, Brown and Co., 34 Beacon St., Boston 6, Mass., 1960. Pp. 158. $3.50.

Few of the famous Arabian legends of Bani Hilal, a great tribe of desert warriors who roamed throughout ancient Arabia, Iraq, and Syria more than a thousand years ago, have been translated into English. Presented in this attractively illustrated book are some of the most representative tales, which are not only exciting reading but also give a picture of Bedouin beliefs, values, and traditions which have remained unchanged over the centuries. Through these we may gain a better understanding of the modern Arab: his admiration for generosity, his fondness of beauty, his loyalty to his tribe. The fierce spirit of the sons of Hilal is revealed through these stories which were then and are now chanted and sung throughout the Arab dominions; each story ends on a note of suspense, creating a desire to read on and on.

Margaret Sandine

I Rode the Black Horse far Away. By Ivy O. Eastwick. Illustrated by Roberta A. Jones. Abingdon Press, E. Washington Sq., Philadelphia 5, Pa., 1960. Pp. 63. $2.00.

A slight book of poetry with a decidedly British flavor. It is profusely illustrated in blue, green, and black. The poems have charm but do not linger in the memory.

Hélène Grossenbacher

Jennie's Mandan Bowl. By Lyla Hoffine. Illustrated by Larry Toschik. Longmans, Green and Co., 119 W. 40th St., New York 18, N.Y., 1960. Pp. 105. $2.75.

Jennie is a shy, confused little Mandan Indian girl who feels a conflict between her Indian heritage and her modern life, which represents the white man's culture. Even her understanding reservation teacher seems un-

able to reach her; but as Jennie carries out, during summer vacation, her promise to her teacher to produce a Mandan bowl under Grandmother's direction, she finds experiences and emotional outlets which help her sort out her confused feelings and achieve sufficient poise to face her class to explain how her lovely bowl was made. This book will serve to fill in where additional material is needed for middle grade Indian story fans.

Julienne Couleur

Tough Enough's Indians. By Ruth and Latrobe Carroll. Henry Z. Walck, 101 Fifth Ave., New York 3, N.Y., 1960. Pp. 64. $2.75.

The Tatum children experience a horrifying forest fire but with the help of Tough Enough and Jonah Climbing Bear, Cherokee Indians, they survive. Their visit with the Cherokees while waiting for their parents to claim them taught the children many things about brotherhood and good will. As usual, the pictures are delightful and forceful.

Marie Z. Cole

How Space Rockets Began. Written and illustrated by LeGrand. Abingdon Press, 810 Broadway Ave., Nashville 2, Tenn., 1960. Pp. 64, $2.00.

An exaggerated, fantastic tale, presumably taken from old family records. The adventures of the Smith family may interest reluctant readers. There is much repetition of words and not much to the plot. The large, colorful illustrations are humorous. It is certain that the reader will not enrich his knowledge of Chicago in any way by reading the story, but he may enjoy a few laughs. This tale is not of the same calibre as *Cats for Kansas* and *Why Cowboys Sing.*

Marie Z. Cole

China Sea Roundup. By Cora Cheney and Ben Partridge. Illustrated by H. Tom Hall. Alfred A. Knopf, 501 Madison Ave., New York 22, N.Y., 1960. Pp. 112. $2.50.

Ropes Randall's plans for happy holidays were changed when he presented his parents with a report card containing a failure in conduct. Our fourth and fifth graders will easily become involved in Ropes' punishment along with his numerous adventures in the fish business as well as spy activities. The illustrations are effective.

Coletta Duncan

Perils of Pacifico. By W. H. Wood. Illustrated by George Adamson. Franklin Watts, 375 Lexington Ave., New York 22, N.Y., 1960. Pp. 119. $2.95.

The humorous events that took place between Pomposo and the brigand Pacifico will greatly amuse the ten-and eleven-year-olds. The author's style is most delightful. Characters are described in very witty and sparkling passages. The black and white illustrations, however, are not too effective.

Coletta Duncan

For the Upper Grades

The Beginning Gardener. By Katherine N. Cutler. M. Barrows and Co., 425 Fourth Ave., New York 16, N. Y., 1961. Pp. 173. $2.95.

Knowing how to begin an activity can serve as the springboard for action. This book supplies guidance for middle and upper-grade pupils whose interest level is geared to action in gardening. Suggestions include plans for use of space indoors and out, and lists of vegetables and flowers with directions for planting, culture, and garden care. For enjoying the results there are tips on how to exhibit flowers and vegetables.

Mary F. Polerecky

How To Grow House Plants. By Millicent E. Selsam. Illustrated by Vera Bock. William Morrow and Co., 425 Fourth Ave., New York 16, N. Y., 1960. Pp. 96. $2.50.

Of particular value to elementary teachers and upper grade pupils, this book presents numerous suggestions for raising common and unusual house plants and experimenting with plant growth and plant hormones. Detailed information for setting up a variety of window sill gardens and instructions for their care are provided as well as a list of common and scientific names of plants and sources of supplies. Desirable conditions for growth are explained in terms of plant physiology and specific plant requirements. In some cases the explanations have been simplified at the sacrifice of accuracy. The illustrations clarify the instructions.

Muriel Beuschlein

Conqueror of Smallpox. By I. E. Levine. Julian Messner, 8 W. 40th St., New York 18, N. Y., 1960. Pp. 190. $2.95.

This excellent biography of one of man's best known benefactors, Dr. Edward Jenner, is very suitable for enrichment reading in science, health, and literature for middle and upper grade pupils. It describes the years of puzzlement combined with patient and frustrating research in immunity that dairy maids had to smallpox as a result of having cowpox. The failures, the ridicule by other doctors, and the temporary loss of prestige in his own community are recorded as well as his successes and honors. The author in his earlier book on Dr. Banting and in this one has successfully solved the problem of presenting science reading material for young people of school age.

Bernice Austrheim

Animal Clocks and Compasses. By Margaret O. Hyde. Illustrated by F. A. Hutchinson. Whittlesey House, 330 W. 42nd St., New York 36, N. Y., 1960. Pp. 151. $2.95.

A unique, fascinating, and scientifically accurate inquiry into the natural rhythms by which animals live and travel is revealed in this book. The time and direction mechanisms which control migrations and hibernations are presented as problems remaining to be solved. Results of these mechanisms, such as the death march of the Lemmings or the consistent use of the same migration routes, are presented in an exciting style with good accompanying illustrations. This book is sure to be enjoyed by middle and upper grade children.

Donald W. Bayer

The First Book of Africa. By Langston Hughes. Franklin Watts, 575 Lexington Ave., New York 22, N. Y., 1960. Pp. 82. $1.95.

The author, an American Negro, gives his impressions of much of the African continent. His views practically never mention the good that colonialism brought to much of Africa but rather emphasize such statements of Kwame Nkrumah as: "We prefer self-government with danger to servitude in tranquillity." If one overlooks Hughes' understandable bias, his book, with exceptionally good photographs, gives the ten- to fourteen-year-old an excellent introduction to the riches and wonderful promise that can make Africa the showplace of independence rather than the present chaos of the Congo.

C. Wallace Dierickx

Know Your Presidents and Their Wives. By George E. Ross. Illustrated by Seymour Fleishman. Rand McNally and Co., Box 7600, Chicago 80, Ill., 1960. Pp. 72. $2.95.

The interesting and vital facts of the development and organization of our national government are presented through the complete, concise, and well organized sequence of information about all the presidents and their first ladies including the newly elected President John F. Kennedy and his wife, Jacqueline. An excellent reference book for middle and upper grades, this volume should definitely be included in the collection of every elementary school library.

Sylvia C. Zahora

Kon-Tiki. By Thor Heyerdahl. Illustrated by William Neebe. Rand McNally and Co., P. O. Box 7600, Chicago 80, Ill., 1960. Pp. 163. $4.95.

In this colorful, attractive version for young people, the author has reproduced his original book almost word for word, thus retaining the original appeal while eliminating the details which are interesting to adults but unessential to children's enjoyment and understanding. This volume contains many of the photographs of the original version, as well as illustrations based on other photographs. An index guides the reader to specific information on all aspects of the expedition. A valuable addition to the collection for boys and girls from sixth grade through high school.

Julienne Couleur

The First Book of Tools. By Gene Liberty. Illustrated by Richard Mayhew. Franklin Watts, 575 Lexington Ave., New York 22, N.Y., 1960. Pp. 62. $1.95.

A profusely illustrated book tracing man's history from the earliest known implements of the Stone Age to their modern descendants. An excellent book for related shop information in the upper elementary grades.

Donald Racky

Industrial Arts Bench Woodworking. With workbook. By John L. Feirer. Charles A. Bennett Co., 237 N. Monroe St., Peoria 3, Ill., 1959. Pp. 208. $3.96. Workbook $1.00.

Seventh and eighth grade pupils will find this book an excellent introduction to woodworking. Included are the sources of lumber, how lumber is transformed, how projects are designed and produced, as well as the use of hand tools and of a few simple machines. Liberal use of color and sketches illustrate the material presented. An excellent workbook complements the text as an aid for the teacher and a guide for the pupil.

Donald Racky

Rope Roundup. By Bill Severn. Illustrated by Yukio Tashiro. David McKay Co., 119 W. 40th St., New York 18, N.Y., 1960. Pp. 237. $3.95.

Here are seven chapters that completely exhaust every interesting and practical use of all kinds of rope. From raw materials to finished product we read about rope magic, crafts, games, sailor and cowboy knots, puzzles, ladders, bridges, and many other ingenious applications of our "taken for granted" rope. The home-crafter, shopman, camp counselor, scout member or leader will like this book; here too might be a solution to the gift selection problem for any of these active people.

Fred O. Anderson

Homemaking for Teen-agers. Revised. By Irene McDermott and Florence Nicholas. Charles A. Bennett Co., 237 N. Monroe St., Peoria 3, Ill., 1960. Pp. 492. $3.60.

The up-to-date subject matter in this text on family living and homemaking makes use of the experiences of the pupil and simultaneously introduces new information and skills. The suggested summaries, experiences, and demonstrations are valuable for both teacher and pupil. Illustrations and pictures are numerous, accurate, and informative. Some of the projects in foods and clothing are beyond the ability of children of the junior high school age.

Mary Cain

For the High School

Of Mice, Men and Molecules. By John H. Heller. Charles Scribner's Sons, 597 Fifth Ave., New York 17, N. Y., 1960. Pp. 176. $3.95.

Written by a medical doctor engaged in basic researches, this timely book opens the door to our future scientific efforts. The author calls for a greater support of "pure" researches and an increased cooperation between such scientific disciplines as medicine, biology, bacteriology, physics, electronics, and chemistry. His thesis is sound and well documented. This quote reveals but one of the many shocking facts: "Last year more was spent on research in poultry nutrition than the entire United States budget for basic research in mental disease." The writing is lucid and direct. Highly recommended to those in their middle and late teens.

Francesco B. Trama

The Earth: Rocks, Minerals and Fossils. By W. B. Harland. Illustrated by Paxton Chadwick. Franklin Watts, 575 Lexington Ave., New York 22, N. Y., 1960. Pp. 255. $4.95.

A wealth of basic information about rocks, minerals, and fossils is accurately presented in clear, precise language. Excellent, colorful illustrations help to clarify the text. Nine charts provide reference material which summarizes some of the text. There is an interesting combined glossary and index with simple diagrams that is constantly referred to in the text by entries in small capital letters. Recommended to upper grade and high school librarians for enrichment reading.

Bernice J. Austrheim

Science, Science, Science. By Russell Hamilton. Franklin Watts, 575 Lexington Ave., New York 22, N. Y., 1960. Pp. 210. $2.95.

Did you ever read of hens laying colored eggs, tomatoes sprouting whiskers, tearless onions, apples that defy gravity, or that the original miracle drug, of all things, is aspirin and that we Americans consume 42 million pills every 24 hours? Would it surprise you to learn that Socrates whom we have considered only as a philosopher was among the first to apply the scientific method?

To answer these questions and for further fascinating reading on the lives of prominent men who have made notable contributions to the field of science one would need to search far to find a more interesting book. Every individual and every topic is presented in a charming, absorbing yet very readable style which highly recommends this book for all ages from childhood to adulthood. Not only is it interesting reading but it is recommended for motivating an interest in science, especially at the high school level.

Walter G. Selig

Exploring Under the Earth. By Roy A. Gallant. Illustrated by John Polgreen. Garden City Books, 75 Franklin St., Garden City, N. Y., 1960. Pp. 120. $2.95.

An attractive up-to-date, simplified story of geology and geophysics. There are explanations and fine pictorial material to illustrate such scientific techniques as seismic sounding, core sampling, echo sounding, methods of collecting animals from the trenches of the ocean floor, and the study of the earth's magnetism. Of the many children's books being published at this time about earth science and the findings of the international geographical year, this is the best one that this reviewer has read. The author presents the right amount of information without oversimplification or distortion of scientific principles. Classical explanations are compared with modern theories and viewpoints of geologists and geophysicists actively engaged in research. Appropriate for enrichment reading and library research.

Bernice J. Austrheim

Understanding Light. By Beulah Tannenbaum and Myra Stillman. Illustrated by Gustav Schrotter. Whittlesey House, 330 W. 42nd St., New York 36, N. Y., 1960. Pp. 144. $3.00.

Many of the principles that govern the behavior of light as it bends, bounces, separates, and disappears are explained in detail. The broad range of materials covered in this high school book includes the study of natural light, cold light, the electromagnetic spectrum, the eye, sources of light, and some of the modern concepts of light energy. The contributions of the many scientists who played an important role in the understanding of light are revealed.

Henry J. Jaris

12 Pioneers of Science. By Harry Sootin. Vanguard Press, 424 Madison Ave., New York 17, N. Y., 1960. Pp. 254. $3.00.

A collection of short biographies of the following people: Pascal, Scheele, Volta, Davy, Darwin, Adams, Metchnikoff, Hertz, Mendel, DuBois, Langley, and Becquerel. In the chapter devoted to each person, the story of his life is told briefly and his contribution to science or technology explained. Since a biography of many of these people cannot be found in other books at this grade level, this will be useful for general science classes in spite of oversimplification and superficial treatment.

Dorothy Schumacher

Map Making: The Art That Became a Science. By Lloyd A. Brown. Little, Brown and Co., 34 Beacon St., Boston 6, Mass., 1960. Pp. 217. $4.75.

Two hundred seventeen pages of historical facts, geographical concepts, and scientific

truths brilliantly combined to produce a much-needed book in the area of map construction. Upper grade and high school students will be inspired after reading the detailed descriptions of the work of Strabo, Ptolemy, Mercator, Ortelius, and others. An exciting, stimulating account of an ancient art and current science. Excellent prints and drawings. Lorraine LaVigne

Word Finder. By Ruth I. Anderson *et al.* Prentice-Hall, Englewood Cliffs, N.J., 1960. Pp. 244. $1.44.

A small, hard-backed book of about sixteen thousand words, showing spelling, accent, and syllabication. A helpful feature is the use of the diagonal (di·ag'o/nal) to indicate the best place to divide a word at the end of a line. Words have been chosen with particular attention to their use by proofreaders, secretaries, students, typists, and writers. There are a few well worded rules for spelling, capitalization, and punctuation. High school and college students would benefit from constant use of a personal copy.

Hélène Grossenbacher

Homes, America's Building Business. By Pauline Arnold and Percival White. Illustrated by Tom Funk. Holiday House, 8 W. 13th St., New York 11, N. Y., 1960. P. 379. $4.50.

A comprehensive survey of this complex industry, how it developed, what it embraces, and how it works. The American home is traced from the pioneer cabin to the modern split-level house. Major emphasis is placed on home building of today, which embraces an industry that utilizes research, invention, manufacture, and finance. The construction of present day houses in making use of the age-old materials of wood and stone as well as such newer devices as air conditioning and radiant and solar heating provides work for the trade craftsman and the union specialist. Best suited for the teen-aged or older reader. Donald Racky

The Art and Craft of Screen Process Printing. By Albert Kosloff. Bruce Publishing Co., 400 N. Broadway, Milwaukee 1, Wis., 1960. Pp. 173. $3.75.

This book treats the technical aspects of screen printing, covering very interestingly the historical background and the contemporary uses of the process. It also features a discussion of the use of this medium in related fields. The illustrations are a bit old-fashioned; one feels that a book written in the sixties should also have a contemporary look in typography and photography. For classroom needs too much of the book is devoted to the photographic screen process. It is an excellent text for the technician or for use in the vocational high school or at the college level. Lee L. Randolph

Industrial Arts Woodworking. Revised edition. By John L. Feirer. Charles A. Bennett Co., 237 N. Monroe St., Peoria 3, Ill., 1960. Pp. 320. $3.24.

This new edition of an old favorite contains generous coverage and information on the subject of woods and woodworking. Of special interest and of great value is a section on design, without which fine work in this universal material is impossible. The accompanying workbook, extremely useful to the instructor and to first year high school students, contains a wealth of testing material paralleling fifteen sections of the text.

Fred O. Anderson

Gregg Notehand. By Louis A. Leslie, Charles E. Zoubek, and James Deese. Shorthand written by Charles Rader. McGraw-Hill Book Co., 330 W. 42nd St., New York 36, N. Y., 1960. Pp. 320. $4.48.

A first in personal use shorthand notetaking. The well illustrated text designed as a semester course could be used in secondary as well as in college classes. The material is organized into two basic units; namely, the psychology and technique of taking useful notes while reading, studying, or listening to lectures and a simple easy-to-learn method of shorthand based on the Gregg alphabet. This book is a significant contribution to general education. Recommended. Mary A. Woeber

Careers and Opportunities in Science. By Philip Pollack. E. P. Dutton and Co., 300 Park Ave., New York 10, N. Y., 1960. Pp. 194. $3.95.

The author has presented a simple, clear, concise picture of career opportunities in science today. To the high school student who has above average ability and genuine interest in this subject, the book gives an exciting portrayal of his future possibilities. The areas of specialization in physics, chemistry, geology, and biology are presented in an unusually interesting manner. High school science students should read this text in order to clarify their own thinking in regard to choice of colleges and majors.

Isabel G. Lassen

Exploring the River. By John and Jane Greverus Perry. Illustrated by Stephen Kraft. McGraw-Hill Book Co., 330 W. 42nd St., New York 36, N. Y., 1960. Pp. 203. $3.50.

This text stresses the part that a river plays in the world and discusses its relationship and effect on various aspects of life. It is written in an easily understood language and is supplemented by numerous black and white illustrations. Upper grade pupils with a pioneer spirit and an interest in the natural sciences will profit from this informative account. John F. Etten

Books Received

For the High School

Doctor Paracelsus. By Sidney Rosen. Illustrated by Rafaello Busoni. Little, Brown and Co., 34 Beacon St., Boston 6, Mass., 1959. Pp. 214. $3.50.

Bookkeeping and Accounting, Introductory. Seventh edition. By Saul Wolpert. Prentice-Hall, Englewood Cliffs, N. J., 1960. Pp. 492. $3.64.

Teen-age Treasury of Good Humor. Edited by Seon Manley. Funk and Wagnalls Co., 153 E. 24th St., New York 10, N. Y., 1960. Pp. 334. $4.95.

Radio Serving. Third edition. By Abraham Marcus. Prentice-Hall, Englewood Cliffs, N. J., 1960. Pp. 649. $6.00.

Architectural Drafting. Third edition. By William J. Hornung. Prentice-Hall, Englewood Cliffs, N. J., 1960. Pp. 230. $5.50.

Famous Indianapolis Cars and Drivers. By Brock Yates. Harper and Bros., 49 E. 33rd St., New York 16, N. Y., 1960. Pp. 219. $3.25.

How to Get into College. Revised edition. By Frank H. Bowle. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 185. $2.95.

From Pearl Harbor to Okinawa. By Bruce Bliven, Jr. Random House, 457 Madison Ave., New York 22, N. Y., 1960. Pp. 192. $1.95.

Science for Progress Series. Science for Progress. Science for Your Needs. Science in Today's World. Revised editions. By Maurice U. Ames, Arthur O. Baker, and Joseph F. Leahy. Prentice-Hall, Englewood Cliffs, N. J., 1961. Pp. 610, 433, and 416 respectively. $5.24, $4.12, and $3.96 respectively.

Classics in New Format

The Song of Hiawatha. By Henry W. Longfellow. Illustrated by Kiddell-Monroe. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 214. $3.25.

Jo's Boys. By Louisa M. Alcott. Illustrated by Harry Toothill. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 325. $2.75.

A Child's Garden of Verses. By Robert Louis Stevenson. Illustrated by Mary Shillabeer. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 127. $2.75.

Kidnapped. By Robert Louis Stevenson. Illustrated by G. Oakley. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 246. $2.75.

Sir William and the Wolf and other Stories from the Days of Chivalry. Retold by John Hampden. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 178. $3.25.

Tales of Make Believe. Edited by Roger L. Green. E. P. Dutton and Co., 300 Park Ave., S., New York 10, N. Y., 1960. Pp. 235. $3.25.

The Wizard of Oz and the Land of Oz. By L. Frank Baum. Illustrated by Rita Fava. Random House, 457 Madison Ave., New York 22, N. Y., 1960. Pp. 415. $1.95.

Exploits of Don Quixote. Retold by James Reeves. Illustrated by E. Ardizzone. Henry Z. Walck, 101 Fifth Ave., New York 3, N. Y., 1960. Pp. 219. $3.75.

Jan of the Windmill. By Juliana Horatia Ewing. Illustrated by Mrs. Allingham. Henry Z. Walck, 101 Fifth Ave., New York 3, N. Y., Pp. 242. $3.50.

A Penny a Day. By Walter de la Mare. Illustrated by Paul Kennedy. Alfred Knopf, 457 Madison Ave., New York 22, N. Y., 1960. Pp. 209. $3.00.

Pancakes and the Merry-Go-Round. Written and illustrated by Emma L. Brock. Alfred A. Knopf, 457 Madison Ave., New York 22, N. Y., 1960. Pp. 77. $2.50.

Biographies for the High School

Isaac Newton, Mastermind of Modern Science. By David C. Knight. Franklin Watts, 575 Lexington Ave., New York 22, N. Y., 1961. Pp. 153. $2.95.

Michael Faraday and the Electric Dynamo. By Charles Paul May. Franklin Watts, 575 Lexington Ave., New York 22, N. Y., 1961. Pp. 144. $1.95.

The Man Who Wouldn't Give Up, Henry Clay. By Katharine E. Wilkie. Julian Messner, 8 W. 40th St., New York 18, N. Y., 1961. Pp. 192. $2.95.

Educational Conferences and Conventions

April 16-22: National Library Week.

April 24-28: Department of Audio-Visual Instruction, NEA, Miami Beach, Florida.

May 4-6: National School Boards Association, Philadelphia, Pennsylvania.

May 5-6: International Reading Association, St. Louis, Missouri.

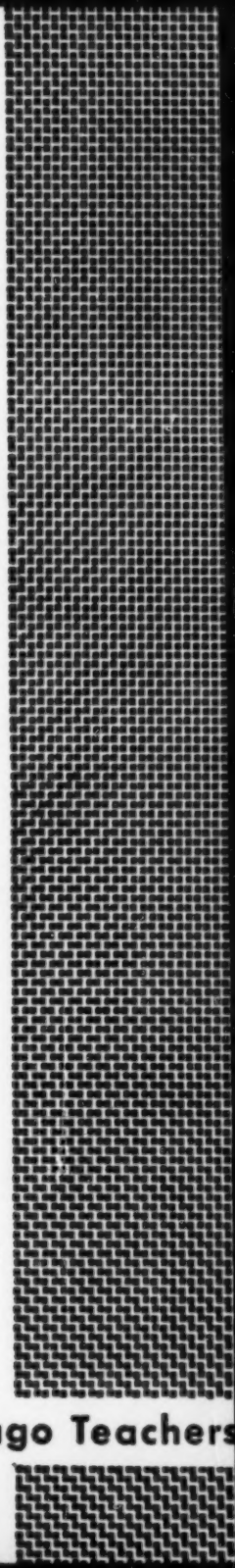
May 21-24: National Congress of Parents and Teachers, Kansas City, Missouri.

June 14-18: American Driver Education Association, Miami Beach, Florida.

June 18-22: National Association of Student Councils, Oklahoma City, Oklahoma.

June 25-30: National Education Association, Atlantic City, New Jersey.

August 20-26: National Conference of Professors of Educational Administration, Berkeley, California.



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